Alcatel-Lucent Enterprise

Communication Solutions for enterprises

Customer proposal

Name of Presenter

Date (Format as Month, 2012)

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2 A partner you can trust

Alcatel-Lucent Changes the Conversation

In response to the challenges of new compliance requirements, sophisticated user demands, increasing levels of information, network complexity and a highly competitive market, enterprises need to become more and more interactive.

Besides, businesses today have to cope with the "consumerization" of the enterprise and changes in the way people want to work.

Thus, communication has moved from being just another utility service to becoming a strategic company asset. It becomes the driver to enable employees to the react at the speed of their business and customers' demands.

Alcatel-Lucent approach consists in helping Enterprises to change the Conversation:

- For Communications, we deliver Collaborative Conversations
- For Networks, we deliver Application Fluent Networks

Enabling CONVERSATION for enterprises is about breaking the boundaries in order to allow multiparty, multi-devices and multimedia communications.

Overview

This solution adapts to your immediate needs and supports your future growth.

It includes:

- The main site
- Optional remote sites
- Users (IP, TDM, SIP, mobile, tablets, etc.)
- Terminals (IP, TDM, DECT™, WLAN)
- Value-added applications such as unified communications and collaboration, one number services, …

The Alcatel-Lucent Enterprise Solutions improve the everyday efficiency of each employee by providing one of the best performing, robust and ergonomic communication tools on the market; enterprise telephony and unified communications and collaboration applications.

When employees are more agile and productive, the business is more agile and productive.

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3 The Communication Architecture

The starting point for the Alcatel-Lucent communications solution is a high-performance communications software suite – the OmniPCX Enterprise. This software suite includes a set of telecommunications applications based on the Linux operating system and can be used, under license, to access more than 500 telephony services. It can also be hosted on four types of servers that align with corporate requirements:

- Common hardware CPU ("rack" module)
- Crystal hardware CPU (crystal shelf)
- Market standard servers
- OpenTouch™ Business Edition server

The communications server supports several media gateways to provide connectivity to the telephone networks and other devices. Two types of media gateways are generally used in the OmniPCX Enterprise mid-market solution: Common hardware, for installations handling normal call volumes, and crystal hardware, for installations handling high call volumes.

The OmniPCX Enterprise adapts to all types of network infrastructure: voice and/or data, fixed or wireless. A large number of tools are available for access to the services offered.

When communication needs to include management, unified communication, basic contact center services, or openness to a specific third-party application, the OpenTouch™ Business Edition Solution should be considered. Designed to meet the needs of companies with up to 1500 users, it provides the most cost-effective, high-performance and flexible system available today.

3.1 IP ready solution

With this highly modular solution, you can upgrade your current communications system at your own pace to a modern and IP ready communications server.

Benefits

- Employees have access to higher performing tools, including the Alcatel-Lucent 9 Series range of telephones or the services described in the following section.
- Future-safe solution enables management of expenses over time to minimize costs.
- IP-based solution assures ease of switchover to 100-pecent IP telephony, while taking advantage of even more advanced applications (read the New Site/Full IP Solution section).

Architecture

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The update solution is based on an OmniPCX Enterprise server that can be equipped with all types of media gateways (e.g., common hardware rack 1 and rack 3, crystal hardware M2, M3, and the ACT14 and ACT28 which are 19-inch rackable).

The public network and all other equipment are connected directly to the chassis' analog or digital ports.

The existing cabling can be reused and there is no need to update the LAN because voice and data remain on separate networks.

3.2 Full IP solution

The OmniPCX Enterprise easily adapts to new site requirements for a full communications server with IP phones, which are directly connected to the IP network based on a direct IP switching communication server with the requisite Quality of Service (QoS).

Benefits

- Voice/data converged architecture **facilitates network management** and allows greater **adaptability** (ease of changing and adding)
- Opens the way for substantial **savings** and increased **efficiency** resulting from a single infrastructure: the same network is used for voice and data
- **Assures ease of application deployment** network wide with one centralized application for central and remote sites

Overview

For its IP network infrastructure, this full IP solution can be based on Alcatel-Lucent OmniSwitch chassis LAN switches and Alcatel-Lucent OmniStack Stackable LAN switches. For IP telephony, the solution is based on an OmniPCX Enterprise communications server. Together, the products provide a fully converged voice and data solution.

The IP telephones are connected directly to the IP data network. Voice-data cabling is unified for easy connection on the front panel, using RJ-45 modular jack connectors.

Although this is a 100 percent IP solution, analog devices such as fax machines can still be connected via the OmniPCX Enterprise chassis analog ports.

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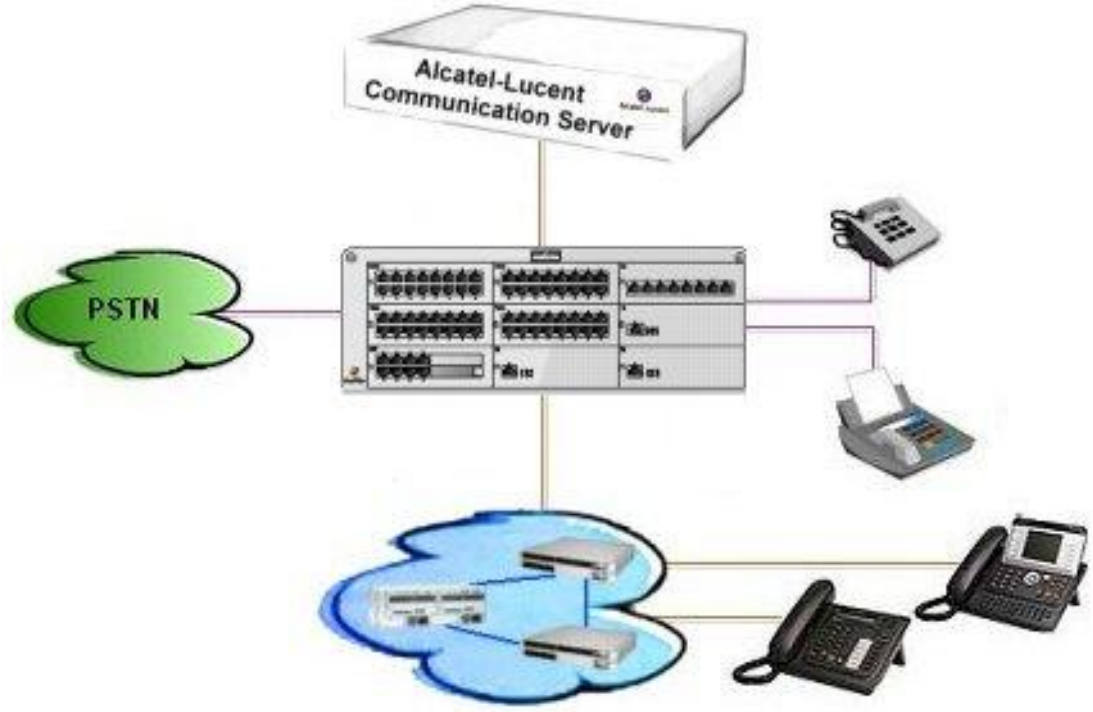
Architecture



The Full IP solution is based on an OmniPCX Enterprise server that can be equipped with all types of media gateways (common hardware rack 1, Rack 3, crystal hardware M2, and M3).

For larger configurations, the OmniPCX Enterprise server can be hosted on a market standard compatible server.

The IP telephones are connected directly to the IP data network. Voice-data cabling is unified for easy connection on the front panel, using RJ-45 modular jack connectors. Although this is a 100-per cent IP solution, analog terminals, such as fax machines or Minitel terminals can still be connected via the chassis analog ports.

The OmniPCX Enterprise also has an integrated SIP gateway for connecting SIP telephones and applications, such as the Alcatel-Lucent OmniTouch 8600 My Instant Communicator or SIP-based applications.

Note: SIP (Session Initialization Protocol) is an open standards protocol that will be increasingly used in public and business networks: it allows new multimedia applications using Voice over IP.

3.3 Multi-site

Alcatel-Lucent offers a multi-site IP infrastructure, allowing you to connect remote sites to the OmniPCX Enterprise server that's installed, for example, at your company's headquarters.

Benefits

Regardless of location, all users benefit from the same level of service and interact as if they were in the same building.

Communication expenses are reduced through:

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- Centralization of telephone subscriptions (PSTN lines shared by all the sites)
- Elimination of inter-site communications costs (the data network is used to route the voice signals between the sites)
- Optimum use of the corporate private network

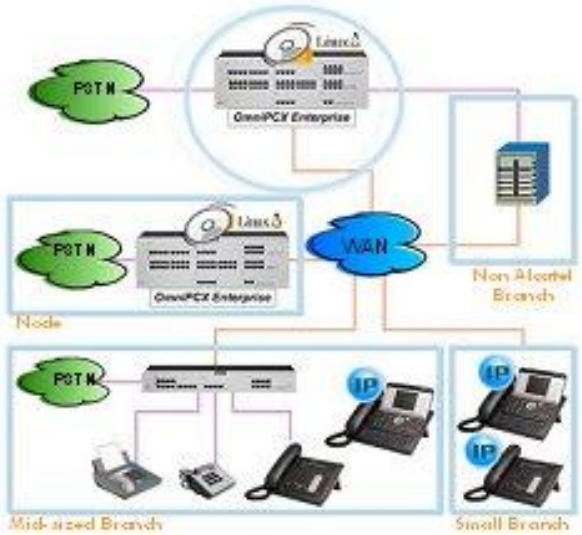
With this solution, you can optimize your management operational **resources**:

- The management platform considers the entire network as a single virtual entity so that any change is automatically replicated across the network.
- The management of your service contracts (integration, management, maintenance, improvement) is simplified by dealing with a single supplier.

Architecture

The architecture adapts according to the size, desired/required service level and the critical aspects of each branch office:

- **Small** branch office: requires the connection of a few IP telephones to the branch office network
- **Mid-sized** branch offices: requires the use of an IP media gateway
- **Node** (branch office that is significant in terms of size, critical aspects or service level requirements): requires the on-site installation of an OmniPCX Enterprise server.
- For a site **not equipped with an Alcatel-Lucent solution**, IP technologies (H.323, SIP) are used in addition to traditional or digital ones (Q.SIG, DPNSS). In this case, the supplied networked level of services is defined by the one established by the standard protocol employed.



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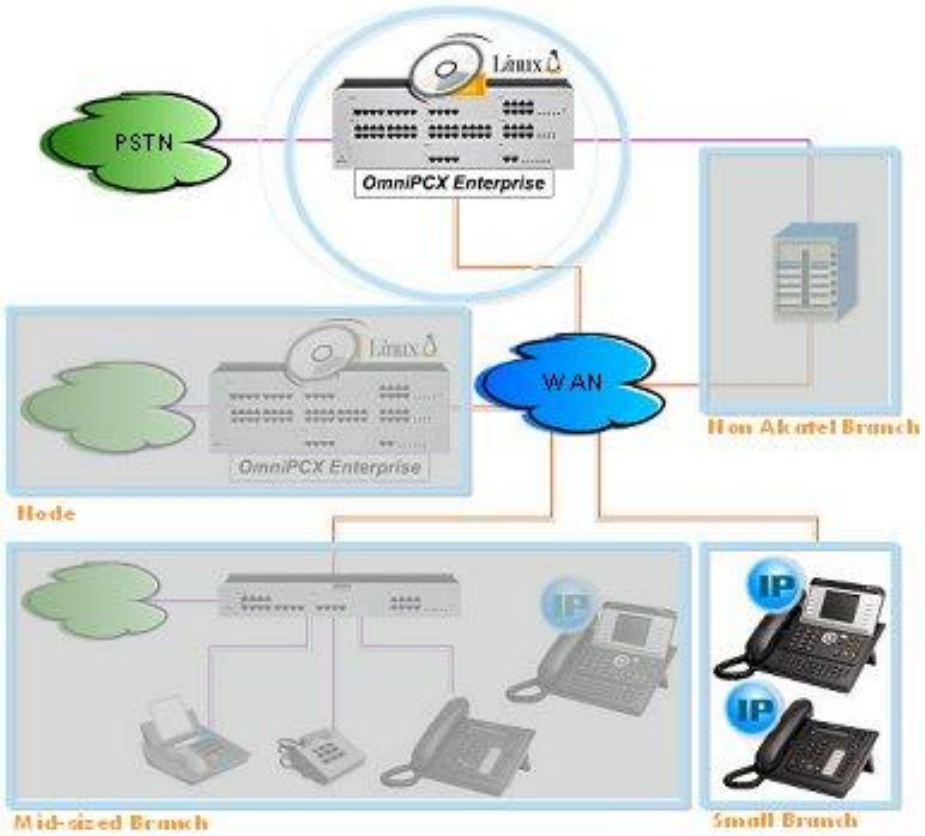
3.4 Configuration for small branch offices



To equip a small branch office, you need only connect a few IP telephones to the data network of the branch office, and configure the required licenses at the central server level.

Benefits

- Fastest and least expensive way of offering the same level of communications service to all your employees
- Branch office employees are integrated into the main server and benefit from services offered by the head office server.

Remarks:

This solution demands a certain level of reliability on the part of the WAN to which the branch office is connected.

As it is a purely IP environment, connecting analog devices (fax machines, …) requires gateways[1].

[1] Alcatel-Lucent partners design, develop and market voice over IP gateway systems and technologies for converged networks. These partnerships are managed by the "Alcatel-Lucent Application Partner Program (AAPP)".

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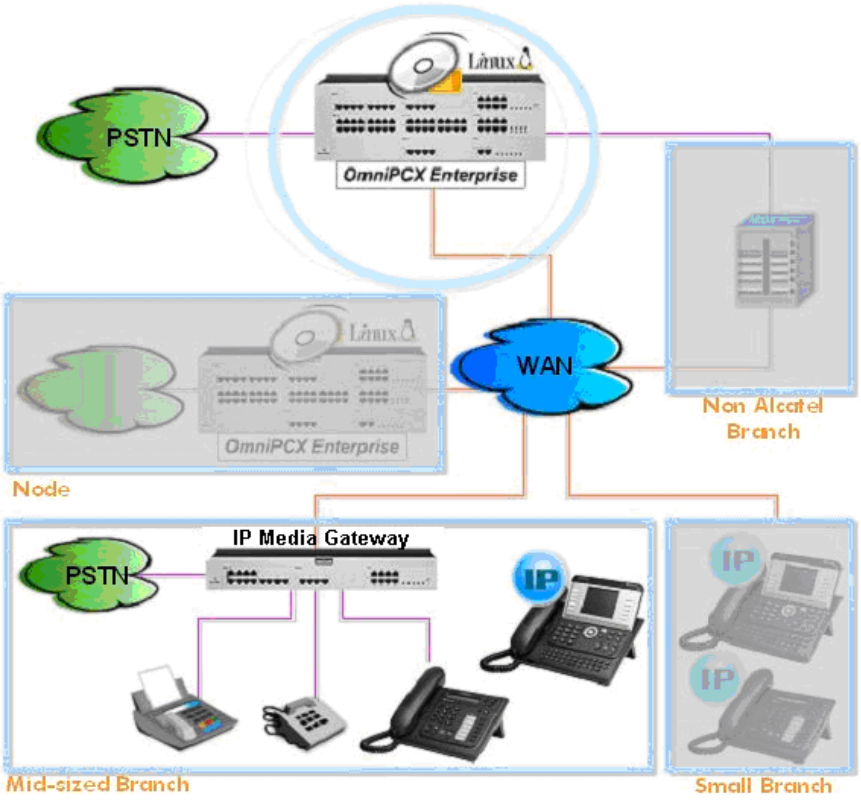
3.5 Configuration for mid-sized branch offices



This configuration is based on a media gateway (without CPU) installed in a branch office via an IP link.

The connectivity with the legacy voice network enables connections to the public network to be created locally and for analog or digital devices.

The RTP mode means that the IP telephones in branch offices do not use the WAN bandwidth for local calls.

In the event of WAN[2] failure, the server automatically connects to the public network to establish a backup link. In this case, the level of services provided is slightly lower.

Benefits

For mid-sized branch offices, usually with up to 100 employees, this solution offers:

- An ideal compromise between cost, availability and connectivity
- Complete integration of branch office employees in the main server in order to benefit from the services offered by the head office server

[2] See the high availability options.

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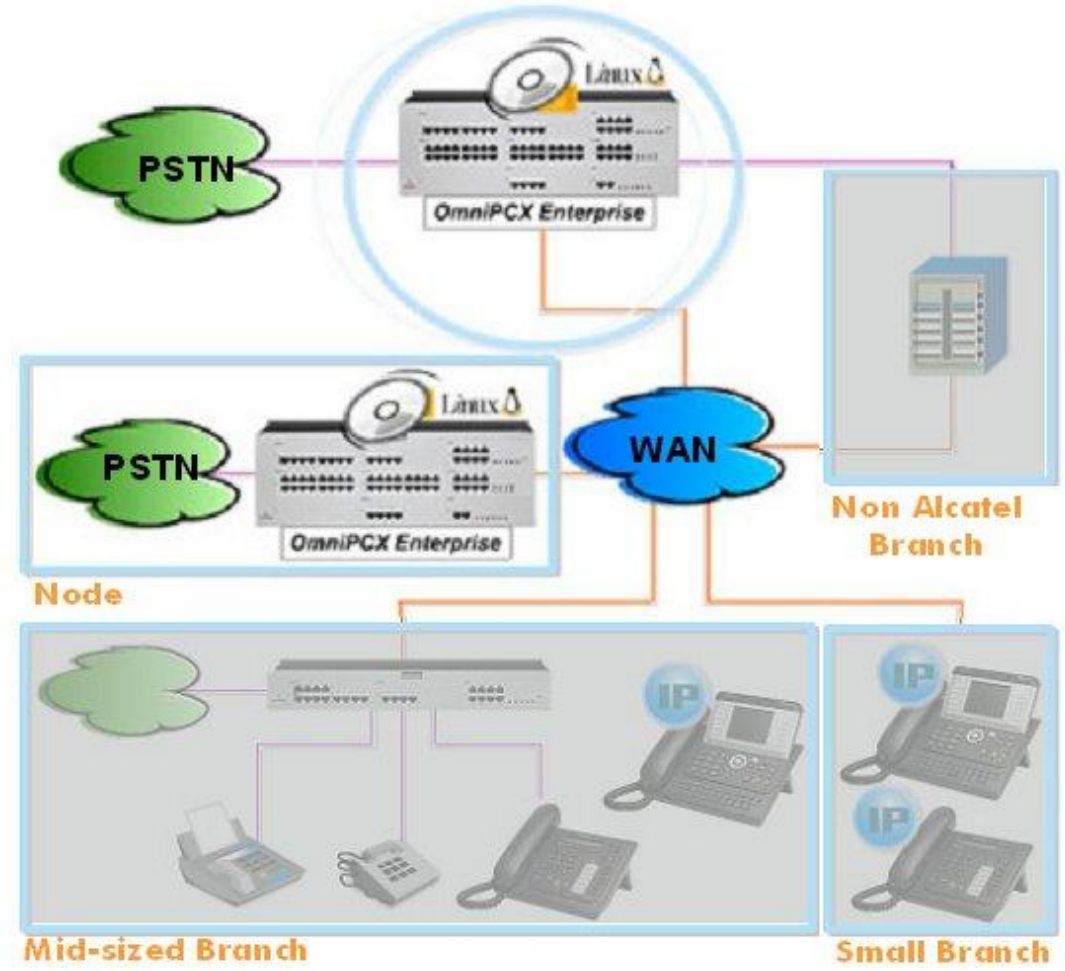
3.6 Configuration in small network nodes



Several OmniPCX Enterprise communication servers are connected together. By using the ABC protocol, this solution provides users with the same set of functions regardless of their site location. This makes it possible to centralize or distribute applications across the network, according to requirements and with no constraints.

(This server is then networked, with a maximum level of interoperability, with the main server using the ABC[3] protocol. The net result is a small network node).

Benefits

- Configuration assures both autonomy and reliability
- Provides an ideal solution for companies wanting to ensure that some of their critical remote sites (e.g., an industrial company's factory site), benefit from a level of service equivalent to that of the headquarters, even in the event of incidents.
- Different corporate sites easily share resources (i.e., applications, human skills and expertise).

[3] **A**lcatel-Lucent **B**usiness **C**ommunication networking.

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4 Improving employee efficiency

4.1 Main communication Enterprise Services

The Alcatel-Lucent OmniPCX Enterprise Communication Server provides an extensive palette of hardware, applications, and services allowing any Enterprise, large, medium or small, to have access to a pool of rich communication tools. The flexible architecture can be used to create basic voice communication networks or multi-sited, multimedia networks capable of transferring complex encrypted data internationally.

The Alcatel-Lucent OmniPCX Enterprise Communication Server features can be divided into the following categories:

- Telephone features linked to the physical capabilities of the hardware and sets
- Embedded applications that are incorporated in the main networking application
- Value added applications. These are services running on an external server, and for which the Alcatel-Lucent OmniPCX Enterprise Communication Server can be seen as a central control server.
- Interfaces for external applications. These interfaces are used to include the Alcatel-Lucent OmniPCX Enterprise Communication Server in an Alcatel-Lucent or a non-Alcatel-Lucent solution.

4.1.1.1 Business Communication Services for Standard Users

Applications are fully integrated in the telephone user interface: voice mail and other applications are entirely supported by context-sensitive soft keys, to allow for efficient communication for all.

This entails:

- Reduced installation and implementation costs
- Fast and easy introduction of new efficient communication tools to users
- Fast return on investment due to efficient use of communication tools

Alcatel-Lucent offers a complete diversified telephone product line to meet every customer's need from the most sophisticated to the simplest, with user backlit displays, headset and bluetooth facilities, as well as specific tones and voice guides.

Note: The available range of Alcatel-Lucent phones is detailed further down in this document.

Business telephone services range from holding a call to switching to another conversation, sending text messages, supervising other telephone sets, pick up any incoming call and many more.

Transparent access to the corporate directory simplifies navigation, improves productivity through the time-saving call by name facility - a key element in user acceptance of business telephony.

Accessing a system feature from another location, e.g. to consult your mailbox from your home, can be done in several ways:

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- the simplest technology is the server-embedded Direct Inward Station Access (DISA). You can call a system extension using over-dialing and transparently make your telephone the central element of your office and day's work.
- software clients on PCs connect to the enterprise over a VPN or a secure SIP. You can then use the embedded VoIP client or use third-party call control of any phone.
- software clients on smartphones connect to the enterprise via a secure data link and place calls via the Communication Server over the cellular network. You can then benefit from the enterprise business telephony when being off-site.

In addition to these conversation services, the Communication Server is able to provide embedded System Services as Alternate Routing Service (ARS) and Least Cost Routing (LCR) to select the most cost-effective route for your calls in a multi-carrier environment (depending on the carriers defined in the routing table).

Telephone services:

- Speed Dialing
- Associated set (definition/modification)
- Automatic callback (busy trunk group/free/busy extension)
- Holding a call, waiting list consultation
- Personal directory and corporate directory
- Access to internal extensions and external numbers

- Transfer to voice mail, to another party, whether free of busy
- Broker call
- Call forwarding to an extension or external number (immediate, when your phone is busy extension/or does not reply, or unconditional, to a hunting group, voice mail, operator)
- Consultation call
- Barging in a conversation
- Last number redial (access to a list of recently dialed numbers)
- Over dialing/DTMF transparency

- Call pickup
- Call waiting indication
- Camp-on busy extension/line
- Substitution of phone sets or moving offices
- Conferences (from three-party telephone conferences to 29-party conferences, either by appointment (meet-me conference) or with a head of conference (mastered conference)

- Call pickup
- Call waiting indication
- Camp-on busy extension/line
- Text messaging
- Ringing customization (according to the calling party profile)
- Direct services to voice mail, direct

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call...

ISDN features:

- Calling line identification presentation (CLIP) (except on analog phones)
- Calling line identification restriction (CLIR)
- Overlap dialing mode
- ISDN text messages (send/receive/store)
- Storage of unanswered calls (with date, time and callback access)

Messaging services

- Voice mail systems configured from the PCX:
  - Can be customized by users
  - Distribution lists
  - Verification of distribution
  - Specific services for mobile users
- Software based applications:
  - User-friendly interface
  - Access from standard e-mail interfaces, mobile devices and telephone sets
  - Personal automated attendant

Fax services

- Software based application
- Seamless integration with Voice over IP and the PBX
- Secure web access
- Secure administration
- High availability: backup server ensuring nothing is lost when the main server is down

Team work

- Attendant services
- Greeting service
- Night forwarding
- Automated attendant
- Dynamic voice assistant
- Telephone and PC adapted and flexible interfaces
- Shared services between different companies

- Holding a call for the group or for one given set
- Group call pickup
- Hunting groups/Intercom groups
- Logging in/out from the group
- Supervision of an extension
- Multiline appearance
- ACD features
- Contact Centers

Manager/assistant configuration:

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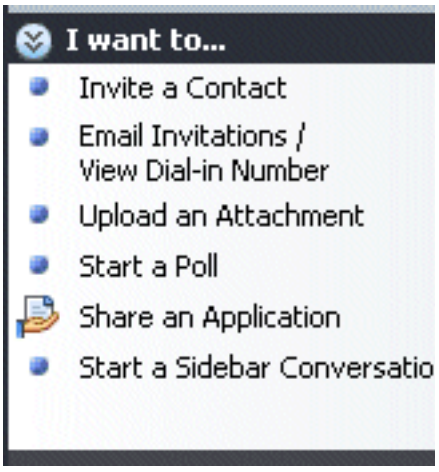
- Pre-programmed set profiles
- Selective filters
- External and internal call filtering
- Flexible configuration
- Private line (which may be forwarded)
- Immediate forwarding activated by the manager or the assistant
- Specific text messaging features
- Discreet listening of filtered line
- Assistant absence management
- White list (filtering)

Mobility:

- DECT phones
- WLAN phones
- Free seating application
- Same level of service on a personal mobile phone
- User's choice of "current" device
- Transparent shift from one device to the other

Collaboration services:



- Dial-in, dial-out
- Create your "contact list"
- See who's online
- Start and participate in conferences:
  - Audio
  - Video
  - Instant messaging
  - All together
- Share your desktop
- Conduct polls
- Make presentations
- Make private comments
- Upload attachments

4.1.1.2 Business Communication Services for All Users

Internal calls

After receiving a dial tone, the caller dials the directory number. A voice guide may replace the dial tone, for example, if the caller has activated call forwarding.

- The called party is free:

  When the called party answers, a call is established. At the end of a call, when one of the

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callers hangs up, the other caller hears a busy signal.

- The called party is busy

  The caller hears the busy signal or a voice guide associated with the caller's rights. According to the rights, the caller may be authorized to:

  - Request a camp-on a busy phone
  - Barge in
  - Make a call announcement on the called phone's speaker (from a multiline phone)
  - Request an automatic callback

Calls outside the system (direct outward dialing – DOD)

After taking a phone off the hook, the caller dials the prefix for direct access to an external line. The caller receives the dial tone and then dials the number of the external user. If the class of service of the phone does not allow calls to the number dialed or if there is no available line, the caller receives a busy tone.

Attendant call

Users can call any available attendant in the system by dialing a prefix. They can also call a specific attendant by dialing that attendant's directory number. Calls to attendants are loaded into a specific queue and are answered in order of arrival. By using different call distributions, specific types of calls (defined internal users, external overflowed, ISDN caller, etc.) may appear on different soft keys (4059) so that the attendant can answer calls based on priority (for more information, see: module Attendant Services - Greeting).

Over dialing (DTMF dialing)

This feature allows decimal or DTMF dialing on an external line. The user requests transparency via a soft key or by dialing the transparency suffix. If a trunk or trunk group is declared to be on automatic transparency, the user may proceed immediately without a request.

Number store (store/redial) and communication log

On all available telephone sets, by dialing a special prefix or by pressing the redial key, any user can redial the last number dialed.

Users of Alcatel-Lucent 8/9 series and 8082 My IC Phone sets can store a specific number for later use. The store/redial key is provided for this feature.

On these advanced phones, the redial button displays a list of up to previous communications/sessions. The list stores automatically each successful call with called number information.

Consultation call

User A, on an internal or external call with User B, can make a consultation call to a third party by dialing a suffix, by pressing a key, or by dialing the extension number of the third party directly. User A hears the dial tone (or a voice guide) and can then make a call like any other ordinary call. During the consultation call, User B is put on hold.

Broker call

During a consultation call initiated by User A, User A in conversation with User C can return to User B in any of the following ways:

- Dialing the broker call prefix

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- Pressing a key
- Pressing a line key on multiline sets (Alcatel-Lucent 8/9 series phones)

This operation can be repeated from User B to User C to User B.

Transfer

When in conversation with User B, User A can transfer User B to another user or to an attendant. Parties may be internal or external. If the connection is not allowed, the call is routed back to the transfer initiator. Transfer is possible when the class of service of the phones involved authorizes the connection. Transfer is achieved by dialing the transfer prefix or by pressing a soft key.

The transferred caller receives the ringing tone and, if busy, the target phone receives a beep alerting them of the call on hold. If at the end of a configurable time period, the user at the transfer target phone has not answered, the call on hold is forwarded to the attendant.

If the transfer is to an attendant, the call is put in the appropriate waiting queue.

Non answered calls

The list of external or internal non answered calls is displayed on Alcatel-Lucent 8/9 series and 8082 My IC Phone sets. Each time, a new call is presented but not answered, the caller identity is stored in the non answered call list and the display (or message led) indicates a call was not answered

Callback

There are several kinds of callback feature:

- Callback Request: caller can request it at anytime; callee is notified about a request to callback; callee can chose to call back the caller or not.
- Automatic Callback (also called Call Completion): the system decides when automatic callback must be offered; the caller then request for automatic callback; the system will try to automatically establish a call between caller and callee as soon as they are available (w/o any control from caller neither callee). There is no notification for caller neither for callee. Offer for Automatic Callback can occur when:
  - Callee does not answer, and not forward on no answer, it is named Call Completion on No Response
  - Callee is busy, and not forwarded on busy state, it is named Call Completion on Busy Subscriber.

  CCBS and CCNR services are available for OpenTouch Users.

  CCBS and Callback request services are available for Standard Users.

  Only CCBS service is available between both Standard and OpenTouch users.

Unanswered call callback

A user can automatically access and call the last caller back (unanswered call) by dialing a specific prefix or using a specific soft key. If using an Alcatel-Lucent 8/9 series or 8082 My IC Phone sets, the name of the last caller is displayed.

Automatic callback on busy phones

When calling busy phone B, User A may request an automatic callback. User A will be called back when User B finishes the call in progress. When phone B is released, phone A is rung. User A picks up the handset and phone B is rung. User A can cancel the automatic callback service by calling

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User B or by dialing a cancellation prefix (management option) or using a specific soft key.

Automatic callback on free phones

Any user calling a free advanced phone that is not answered can request a callback. The LED and/or icon message flash on the phone that has received the request for a callback. The requested user can review the list of people who have requested a callback. The LED continues to flash until each of the messages or call back requests are processed.

Communication forwarding

Night forwarding

After the attendant logs off the last console or according to a predefined timetable, external calls are routed to a phone or the ringing service. Two simultaneous configurations are possible:

- General forwarding:

  External calls are routed to one specified phone. If this phone is already on a call, the calls are parked in a specific queue.

- Night service:

  External calls are routed to a ringing network; any user can answer by dialing the night answering prefix or pressing the specific soft key. Internal attendant calls are routed either to general forwarding or the night service depending on attendant choice.

Unconditional forwarding

Any phone A can forward all its calls to any phone B; User A can still make outgoing calls. The service is activated from phone A by the routing menu or a prefix. Another forwarding will cancel the previous one.

Immediate forwarding on busy

User A's calls are immediately routed to a predefined User B. When A's phone is busy, User A can still make outgoing calls. The service is activated from phone A or phone B by the routing menu. Another forwarding will cancel the previous one.

Communication deflect

When a user is called, advanced set displays indicate the name or the number of the caller (internal, external, or ISDN/PSTN). The called party can forward (transparently to the caller) this call to another phone during the ringing period.

In a Manager/Assistant configuration: when the manager's phone is ringing, the manager can press a key to forward the call to an internal user and the destination may be predefined. If the manager wants to route the call to the assistant but there are several assistants, the manager must also press the speed dial key to send the call to the right assistant.

Forwarding a private line

In a Manager/Assistant configuration: when screening is activated, a manager may forward her/his private line to an internal or external caller. All private incoming calls and, according to screening scenarios, reserved incoming calls arriving on screened lines, will follow the forwarding.

Forwarding on no answer

After a predefined time limit has been exceeded and an individual does not answer, the incoming call is routed to another predefined user. The service is activated via a routing menu or a prefix. The service can be cancelled from phone A or from phone B. Another time delayed forwarding will cancel the previous action.

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Forwarding on no answer and immediate forwarding on busy

Combines the immediate forwarding on busy and time delayed forwarding on no answer services described above.

Unconditional external forwarding

User A's internal/external calls are immediately routed to an external number chosen by User A. This service is activated or cancelled via the routing menu from phone A. Another unconditional forwarding cancels the previous one.

Forwarding to voice mail

User A's incoming internal and external calls are immediately forwarded to the associated voice mailbox. This service is activated or cancelled via the routing menu.

Three-party conference

Three-party conference communications allow a simultaneous conversation in audio or audio/video between three parties. The user making a consultation call initiates the three-party conference by pressing the specific soft key.

It is available from any kind of set in the system.

During the conference, any participant may withdraw without releasing the call between the other two participants.

4.1.2 IP Communication infrastructure

The Alcatel-Lucent OmniPCX Enterprise Communication Server offers a standards based open-distributed communications server for both medium and large enterprises, managing both traditional and IP configurations. With a capacity of 15,000 to 100,000 users, the Alcatel-Lucent OmniPCX Enterprise Communication Server is one of the world's most scalable advanced business communication systems.

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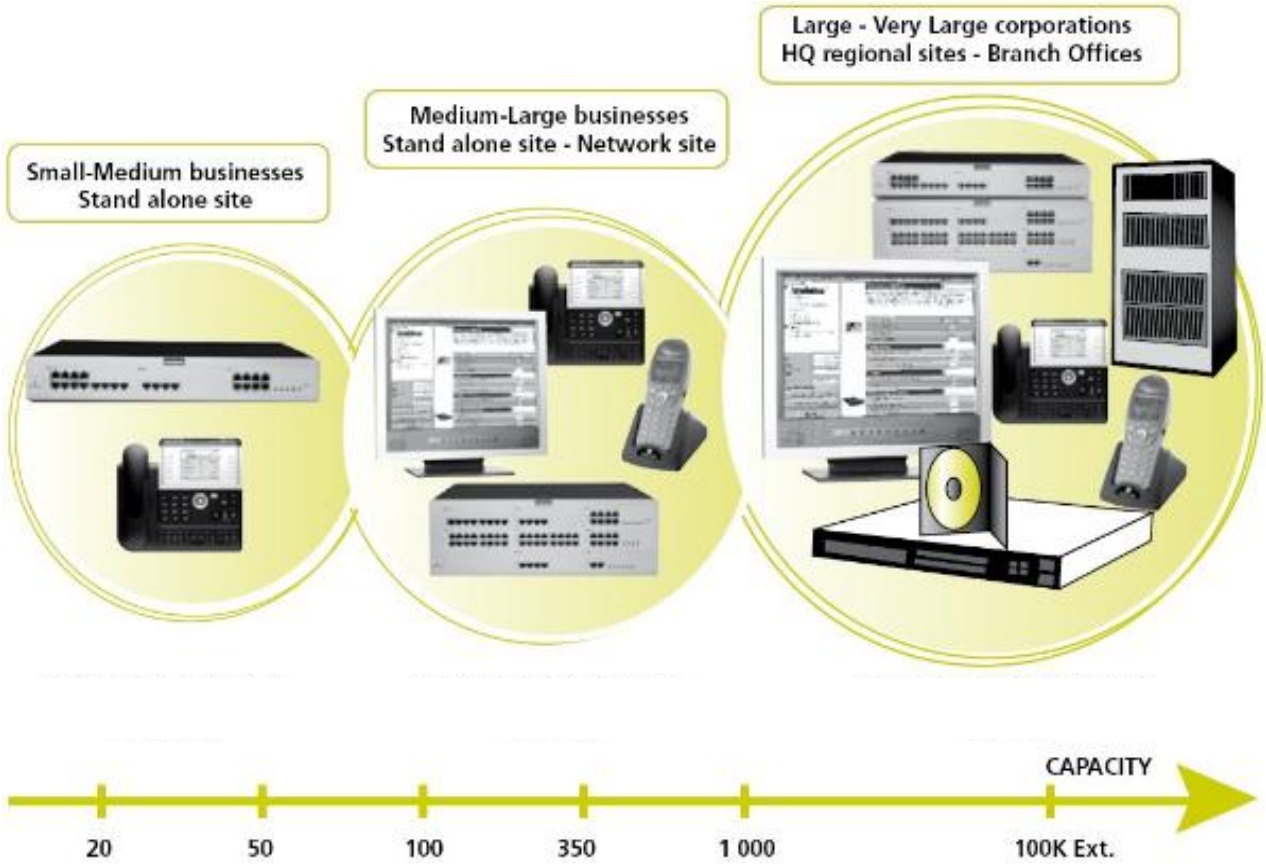

The Alcatel-Lucent OmniPCX Enterprise Communication Server is the reference in carrier-class intranet communication servers and applications.

The Alcatel-Lucent OmniPCX Enterprise Communication Server is designed with IP at the core, allowing fully distributed IP solutions across data networks. Its unique media gateway architecture also allows traditional TDM or mixed IP-TDM configurations.

This IP network may include one or more Local Area Networks (LANs) or local networks linked via public networks to form Wide Area Networks (WANs).

Because of its ability to communicate over any network infrastructure, customers can deploy new technologies at their own pace. They can choose the right solution according to their specific communication requirements and their expected return on investment.

The Alcatel-Lucent OmniPCX Enterprise Communication Server is a complete telephony offer that includes:

- Hardware solutions to create or complement a network
- State of the art telephones
- Embedded applications to facilitate communications inside and outside businesses
- Value added applications to run specialized services
- Interfaces for external applications to use in conjunction with an Alcatel-Lucent or a non-Alcatel-Lucent solution.

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4.1.2.1 Key features

The Alcatel-Lucent OmniPCX Enterprise Communication Server offers the widest range of solutions to answer the necessity for current and future upgrades, imposed by rapidly changing business communications needs.

The Alcatel-Lucent OmniPCX Enterprise Communication Server solution can grow with present and future business at your pace. Alcatel-Lucent OmniPCX Enterprise Communication Server integrates seamlessly in any environment, whether it is the IP infrastructure, the application, or voice and management environments. The robustness and reliability of Alcatel-Lucent OmniPCX Enterprise Communication Server is built around the award winning OmniPCX family of solutions.

Versatile hardware solutions

Using tried and tested hardware, Alcatel-Lucent can furnish a range of products for any size of network, though currently self limited to 100,000 users in a given homogeneous network. From the platform hardware to the telephone set, Alcatel-Lucent has the innovative technology to expand and complement an incumbent network or create a basic telephone communication system ready for limitless expansion.

Native IP wired or wireless solutions

Native IP Solutions enable you to optimize your cost in any environment of your communication solution (traditional cabling, IP multi-site, LAN telephony with IP phones) allowing you to upgrade from legacy TDM topology to IP technology in both wired or wireless environments.

Continual security process

Security is one of the most important concerns for any network client. Alcatel-Lucent's experience in network design, constant and ongoing participation in worldwide security forums and partnerships with security specialists provides answers to this continual process.

Alcatel-Lucent can provide a tailor-made economically viable solution for each client situation.

Enterprise rich telephony

The present offer is the result a long and rich experience acquired from the OmniPCX family of Alcatel-Lucent PBXs, which include: user-friendly digital terminals and operator features, embedded voice mail application, group telephony, manager-assistant features, large attendant console portfolio, PC telephony etc., all of which are designed to increase overall company productivity. Enterprise telephony services are accessible via digital or IP and XML open device

On-site and off-site mobility

Alcatel-Lucent OmniPCX Enterprise Communication Server delivers different solutions for mobility. Mobility can be considered from the simple hands free capabilities within the office environment. It

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can include the access to telephony services within the same enterprise building or to the total mobile communication system inside and outside the Enterprise sites.

The DECT / WLAN level of service is equal to office phone service quality. Mobility features offer communication hand-over and cell roaming over the total radio infrastructure, maintaining constant and seamless communications for the user. The efficient QoS management is realized by the 802.11e standard.

Enterprise campus mobility can allow each employee to have a single phone number regardless of their location. An exceptionally well-designed and ergonomic range of terminals is available for all types of mobile employees.

With the Alcatel-Lucent OmniPCX Enterprise Cellular Client and Dual Mode solutions, off-site mobile employees are intimately integrated within the company communication process and, in this way, are easily reached by correspondents and customers.

Award winning customer relations techniques

The Alcatel-Lucent OmniPCX Enterprise Communication Server customer greeting application reflects the best image for your company with 24/7 welcome functions. Your company image is reflected by availability and accessibility to make customer interactions fluid and straightforward, saving time for both you and your clients.

Borderless solutions - unified communications and collaboration

The Alcatel-Lucent OmniPCX Enterprise Communication Server is a true borderless solution, providing the same level of functionalities, the same user interface and user rights, regardless of the user's location, whether they are at headquarters, in a branch office, or even at home.

Alcatel-Lucent OmniTouch 8400 Instant Communications Suite is the first integrated multi-media, multi-session, multi-device unified communication application in the world. It allows subscribers to tailor, control and manage calls, messages, directories, collaboration tools and information from any location, using any device and any interface. An innovative interface called My Instant Communicator combines telephony services, data services and video streaming over the IP network with new ergonomic components added to existing applications / clients.

Multiple call center solutions

Linked to the development of the Alcatel-Lucent OmniPCX Enterprise Communication Server are call center solutions that cover the needs of small to very large companies. The inbuilt flexibility caters for unknown increases in demand requirements with ergonomics based on years of call center experience.

Simplified management

The Alcatel-Lucent OmniVista 8770 Network Management System simplifies access to your network configuration, with a user friendly interface, to ensure minimum losses in time and to optimize the tasks of system management.

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It includes the secured configuration and management of a system or a network, system call accounting, traffic observation and alarm management, enterprise voice network topology management, performance management features and the enterprise LDAP directory. It is an open interface allowing integration with Hypervisor platform applications such as HP Open View® or TVN® (from C.A.). The MCS set of functions are adapted to carriers needs.

Hospitality management

The Hospitality/Hotel application provides specific room service features, coupled with enhanced external application servers specialized in hospitality management which are connected to the system through the Alcatel-Lucent Hotel Link (AHL).

4.1.2.2 SIP and Web services

Alcatel-Lucent has chosen SIP as one of the corner stones of its standards-based developments for enterprises interactive communication solutions. SIP has been evaluated as the emerging standard for the future of real-time multi-media IP communications for the following reasons:

- SIP evolved out of the Internet community and addresses the implementation of real-time communication services in IP networks:
  - It belongs to the web protocol family: XML, HTML, MIME and others
  - It is directed by the IETF standards body
- SIP is at the center of carrier/service provider networks and is currently poised at the center of several major deployment projects
- Completely endorsed by key industry application vendors
- Standardization has progressed significantly and ongoing work is fueled by strong acceptance from the majority of the communication industry
- It is the only protocol that provides "across-the-board" solutions according to three major application points:
  - End-points (devices, stations, phone-sets, soft-clients)
  - Trunking (private or public)
  - Interactive media-based applications

Currently considered as the protocol for the future of Voice over IP, the implementation of any ubiquitous solution will occur over a period of time, and employ a systematic phased approach. The scope and breadth of the SIP protocol follows the industry standards process (IETF) and will progressively enlarge the level of services for each application as the market advances.

4.1.2.3 SIP Networking

The Alcatel-Lucent OmniPCX Enterprise Communication Server SIP implementation addresses the integration of SIP end-points with other devices controlled by the Alcatel-Lucent OmniPCX Enterprise Communication Server.

- TDM sets and trunks

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- IP sets and trunks (including IP Touch, H.323 trunks)

This implementation prepares the communication application architecture, to provide SIP enabled applications to various sets and devices (whether SIP or not). This concerns notably:

- Alcatel-Lucent OmniTouch 8400 Instant Communications Suite
- GVP IP (Genesys Voice Portal)
- Microsoft Exchange 2007
- Selected Alcatel-Lucent Application Partner Program (AAPP) products such as Thomson ST 2022 & 2030, Ascom i75 and Teledex

The Alcatel-Lucent OmniPCX Enterprise Communication Server comes with an embedded SIP Gateway.

The SIP Gateway consists of the gateway function, and a proxy and registration server:

- The gateway deals with the inter-working functions between SIP and OmniPCX phones or trunks
- The proxy deals with SIP routing and SIP end point (phones) location. The proxy looks up the internal database in order to locate (for example, find the IP address) SIP end points
- The registrar receives registration from SIP end points, and stores mapping of SIP phone numbers and associated IP addresses in an internal database. Authentication for the registration uses MD5

End points can use UDP or TCP transport.

The Alcatel-Lucent OmniPCX Enterprise Communication Server SIP proxy/gateway is embedded in the Communication Server, and thus benefits from the "high availability" feature provided by duplicate (redundant) servers (Backup avoids reregistering of SIP end points after a failure).

4.1.2.4 SIP trunking

The aim of SIP trunking is to allow connections to a SIP operator with the same service level as ISDN. This includes the possibility of different types of access, compatibility with existing services, and integration with the management tools for configuration, observation and call metering.

Several SIP trunks groups can be created:

- One main trunk group is created for the external SIP extensions and Alcatel-Lucent OmniTouch 8400 Instant Communications Suite
- Separate trunk groups are created for external gateways

SIP trunk capacity is an example of the evolution speed in SIP technology. Current capacities can fulfil requirements for large-size installations, including installations with numerous remote sites.

If an installation including several remote sites, it is possible to configure a local SIP connection to the PSTN for each remote site. This, for example, enables accounting tickets to include the SIP trunk group number and to adapt call costs to each site.

The configuration of mini-SIP trunk groups instead of standard SIP trunk groups enables to limit the number of trunks per trunk group, so that the total number of trunks remains lower than the maximum authorized, even in case of many trunk groups.

The communication server performs the SIP trunk group signalling.

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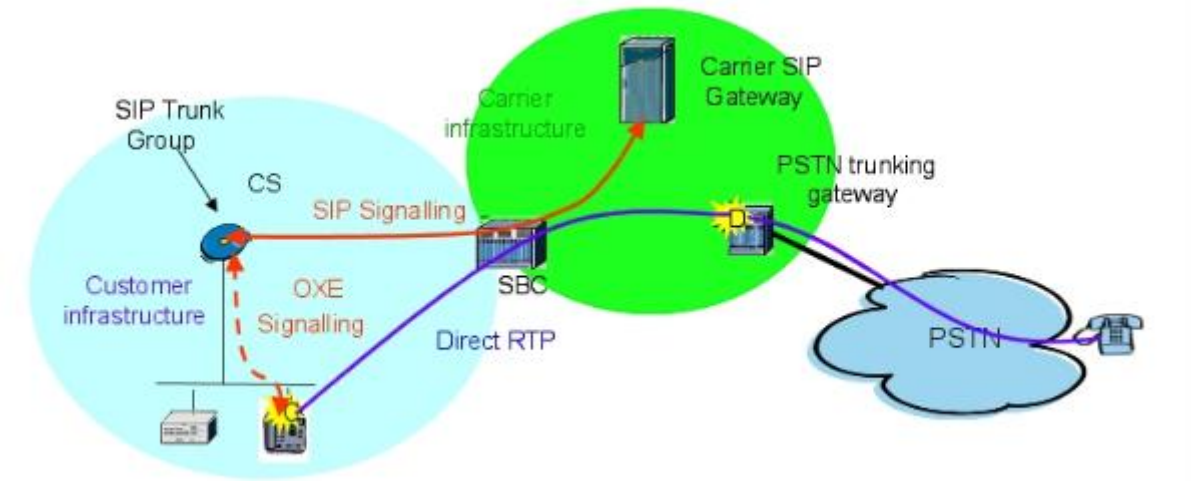
When the Alcatel-Lucent OmniPCX Enterprise Communication Server is connected to the PSTN via a SIP carrier:

- SIP signalling exchanges are between the Communication Server and the SIP carrier gateway.
- Voice flows are exchanged between Alcatel-Lucent IP phones or IP Media Gateway and the carrier Trunking gateway.
- The SBC is the access point to the carrier infrastructure



A Session Border Controller (SBC) is a gateway that typically resides at the boundary of an IP network. This device is used to control the signalling and media streams. SBCs are put into the signalling and/or media path between calling and called party.

The call barring category, connection category and entity are all processed

Call Detail Records (CDR) are generated as for legacy trunk groups, and the Call duration mode is used for accounting purposes.

Call Admission control (CAC) is configured in the Alcatel-Lucent OmniPCX Enterprise Communication Server to control the number of calls through the PSTN trunking gateway and so controls admissible calls between SIP endpoints using the IP domain feature. CAC is used for:

- SIP sets
- Analog sets or FAX device behind SIP gateways (declared as SIP users)

Note: CAC is not applied to SIP video flows. Bandwidth must be calculated to avoid deterioration in voice quality.

4.2 The Phone set range

4.2.1 Alcatel-Lucent 8 and 9 Series Sets

The success of today's business practices depends on reducing the stress the business person experiences as a result of the fast pace of modern communications.

New communications tools have the potential to save time and diminish tasks. The benefits of improved communication technology are only realized if the barriers to using the technology are lowered significantly.

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Alcatel-Lucent offers a full range of desktop phone sets answering end-users communication needs:

- Alternative design
- Enhanced audio quality
- Open to external applications

Two product lines are available:

- The Alcatel-Lucent IP Touch 8 series phone Extended Edition product line, including the following phone sets:

Alcatel-Lucent IP Touch 8 series phone Extended Edition

This product line is fully featured with integrated IP connectivity and telephony, bringing you the converged power of data and voice over IP. Besides its ability to support any web-based business application, the Alcatel-Lucent IP Touch 8 series phone Extended Edition family bring you optimized design, high resolution, adjustable color or grayscale displays, superior listening quality and ring tones.

To complete the Alcatel-Lucent SIP offer, the Alcatel-Lucent IP Touch 4008/4018 phone Extended Edition sets are designed to operate in SIP standalone mode with the Alcatel-Lucent OmniPCX Enterprise Communication Server or another SIP provider.

- The Alcatel-Lucent 9 series product line, including the following phone sets:

Alcatel-Lucent 9 series Sets

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This product line is the TDM counterpart to Alcatel-Lucent IP Touch 8 series phone Extended Edition. It is the natural choice for companies using traditional telephony infrastructures. The Alcatel-Lucent 9 series phone sets take you to a new dimension in audio experience, aesthetics, communications productivity and customer care. This advanced product line benefits from the award-winning power of the Alcatel-Lucent OmniPCX communication servers.

To optimize end-user workspaces, Alcatel-Lucent provides a fully-integrated telephony software application running on a computer and emulating an Alcatel-Lucent IP Touch 4068 Phone set.

This multimedia application, called Alcatel-Lucent IP Desktop Softphone, efficiently replaces the physical desktop set. It provides PC users with a quicker and more user-friendly access to telephone facilities, and thus helps businesses optimize their productivity.

Key benefits:

- Easy to install/deploy (the software is client only, no server is required)
- User-friendly interface, no user training is needed

4.2.2 Alcatel-Lucent Conference Phones

An essential working tool for all conference rooms involves a simple to use and efficient conference phone. The ability to communicate collectively with other work groups can speed up decision making and planning. This reduces the time that can be lost in making connections individually and reaction time for larger meetings.

This type of device is considered to be an essential part of video conferencing but can be used independently in most inter-branch meetings.

Alcatel-Lucent can provide two conference phones:

- Alcatel-Lucent OmniTouch 4125: used in conjunction with a series 8 or 9 set
- Alcatel-Lucent OmniTouch 4135 IP Conference Phone: a stand alone "Conference" phone

OmniTouch 4125

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This module is used in conjunction with a series 8 or a series 9 via the headset plug (except 4019, 4008/4018). A transformer is provided to power the module from a mains supply. The module is activated by pressing the "Hands free" button on the phone. When connected, the module automatically adjusts sound volumes to reduce echo, but in addition, a trim button is located on the module to adjust sound settings manually. Thee microphone settings and 15 sound volume levels are available

The Omnitouch 4125 provides the following advantages:

- An economic method of creating a conference using the existing telephone set
- It can be used in larger offices which serve as temporary conference rooms
- A quality product: Excellent sound reproduction

OmniTouch 4135 IP Conference Phone

The OmniTouch 4135 IP Conference Phone module is a stand alone IP telephone communication device which is declared as a communication device in the SIP PBX. As a declared SIP device, it can benefit from some Alcatel-Lucent OmniPCX Enterprise Communication Server features such as:

- Spatial active redundancy
- Passive Communication Server support.
- Call ticketing and OmniVista 8770 integration

The power supply is provided by Power over Ethernet (PoE) capabilities.

Note 1: If the network cannot provide sufficient power, a power adapter can be provided separately.

Key features

- Four simultaneous connections can be linked to create a five-way call
- Up to four user profiles can be saved with settings and contact details (Local Phone Book, up to 1000 entries per profile)
- LDAP client with direct access to directory
- Call recording function on SD memory card enables meetings and file notes to be saved and transferred to a computer
- Conference guide enables group calls – All participants in a group can be contacted at the same time with one button access. Up to 20 groups can be stored per profile

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4.3 Unified communication solutions

4.3.1.1.1 My Instant Communicator

End users have to deal with an ever-increasing volume of communications: phone calls, voice mails, text messages, faxes, emails, instant messages, and web, voice and video conferences. In addition, there are many there is a wide range of options on the market. This creates a challenge—how to manage and make best use of the different enterprise options on the market. OmniTouch 8600 MIC is an innovative solution to this problem.

It integrates all its communication tools to create a homogeneous experience across different devices and channels. It is the world's first integrated, multi-media, multi-session, multi-device unified communications client solution. My Instant Communicator services can be integrated with existing business applications and accessed seamlessly from a computer, IP phone, or PDA. This innovative software can also be implemented with the Alcatel-Lucent OmniTouch 8400 Instant Communications Suite. This next-generation, IP-based application suite benefits end users with real-time unified communications, a consistent user experience, and complete control over their communications.

OmniTouch 8600 MIC is the ideal multi-media, multi-session, multi-device client software. It delivers an innovative user experience for all types of organizations, guarantees a consistent user interface on all devices and can be fully adapted to ensure a perfect fit with the customer's environment and business processes.

This software includes:

- Telephony services available through a users preferred data and voice collaboration software, such as IBM Lotus Sametime™ or Microsoft Office Communicator™
- Messaging services such as voice mail, fax and e-mail through a Microsoft Outlook™ or Lotus Notes™ mailbox
- Collaboration services such as instant messaging and peer-to-peer video through Voice over IP (VoIP) and point-to-point video
- One Number services through call routing and screening interfaces
- Rich presence services through telephony and instant messaging presence information
- Unified Directory Access, Notifications, Personal Information Management
- and more...

Stay business connected, anywhere. My Instant Communicator transforms mobile devices into an extension of Dynamic Enterprise communication servers. It empowers mobile users with advanced communications functions through business services from the Alcatel-Lucent OmniTouch 8400

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Instant Communications Suite. This solution improves personnel accessibility and productivity by keeping them connected anytime, anywhere.

OmniTouch 8600 MIC smoothly adapts to the available device, making it an intrinsic application of your favorite interface.

Refer to the Alcatel-Lucent user guides for detailed descriptions of the various available interfaces.

When implemented in your network, OmniTouch 8600 MIC, the world's first multimedia, multisession, unified communications product benefits you in many ways. This is because it is designed and built to be available, efficient, consistent, discreet, complete, and secure. OmniTouch 8600 MIC is:

Available:

OmniTouch 8600 MIC makes it easy to use and manage a variety of communications media. End users can rapidly and easily switch between email, phone, messaging, and conferencing. Users can also quickly change their presence status and contact options.

Efficient:

Automatic presence information means end users can work more effectively. Users can simply select a contact in the universal directory. When they do so, OmniTouch 8600 MIC shows the media available to the users to reach that person (e.g. email, voice mail, video, instant message). End users are automatically notified of incoming communications and can consult a balloon pop-up for an easy-to-read summary of missed calls, new messages, and callback requests

Consistent:

OmniTouch 8600 MIC offers a single, coherent user experience whether you access its services on a computer, an IP phone, or a PDA. This means it is particularly user-friendly for employees who use a variety of devices during their working week.

Discreet:

End users are notified of new emails, incoming calls, and requests for instant message exchanges by a discreet 'toast' window. This small pop-up contains key information, such as caller identity, and allows the end user to manage the request. For example, the user can choose to take the call or transfer it to voice mail.

Complete:

OmniTouch 8600 MIC is a single package that integrates five key components: telephony, messaging, collaboration, one number services and presence services.

Secure:

OmniTouch 8600 MIC can be seamlessly integrated into the security policy of the enterprise. It is consistent with high-level requirements in terms of access control, authentication, confidentiality, and software integrity

When implemented in your network, OmniTouch 8600 MIC, the world's first multimedia, multisession, unified communications product offers you:

Telephony, one number, and messaging services options:

- VxML voice mail ports Text-to-speech ports (10 languages available)
- Fax server ports and users for embedded fax option
- (Windows desktop feature-rich telephony client)
- Voice encryption through software-based media encryption for IP soft phones

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Collaboration services options:

- Audio conferencing ports
- Data conferencing ports (features desktop and application sharing and web presentations)
- Video conferencing enabler to control third party video bridges and room systems

Infrastructure options:

- High availability mode (server redundancy)
- Multi-site topology (centralized Alcatel-Lucent OmniTouch 8400 Instant Communications Suite on an OmniPCX Enterprise network)

Bringing IP communications to the Microsoft™ desktop

While the PC is a key communication tool, voice remains the strongest medium for user interaction, with devices such as desk phones and mobile phones carrying the most communication minutes. Increasingly, these three types of communication devices — the PC, the desk phone and the mobile phone — must all be able to access presence information and provide IM capabilities. Interactions are increasingly going beyond enterprise borders, and a new generation of IP communications must link employees with their colleagues within the organization as well as with their partners and customers.

Because the workforce is composed of multiple generations of users, the desktop must reflect this heterogeneity, offering traditional and feature-rich telephony for some users and rich multimedia and media-session communications for new, hyper-connected users. A user profile-based approach is required because communication software must also be available from a wide variety of desk phones, mobile phones and PCs.

Desktop integration of real-time communications offers tremendous benefits for enterprise users. The ability to interact with contacts more easily and quick access to project team members allow enterprises to realize cost savings, improve efficiencies, and increase access to knowledge — leading to higher productivity with immediate and instantaneous communication, interaction, collaboration and knowledge-sharing.

A key challenge in bringing IP communications to the desktop is for IT managers to leverage and integrate best-of-breed software while optimizing investments. In addition, business line managers are looking to improve office worker productivity; for example, with a solution that integrates Alcatel-Lucent telephony, collaboration and unified messaging capabilities with Microsoft® Outlook® e-mail.

With deployment of Microsoft Office Communicator presence and IM, there is an opportunity to integrate Alcatel-Lucent OmniPCX Enterprise Communication Server telephony as well as Alcatel-Lucent OmniTouch™ audio conferencing. By integrating converged desktops, IT managers are able to reduce the TCO. Leveraging existing directories allows implementation of a single sign-on for all applications and directory look-ups.

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Feature	Function	Benefit
Integration of Alcatel-Lucent OmniPCX Enterprise with Microsoft Office suite for real-time communications in the desktop	Integrates rich audio services in a converged desktop	Reduces TCO of communications infrastructure and improves productivity across the enterprise
Single sign-on for all applications and directory look-ups	Leverages existing directories	Increases return on investment (ROI) on IT and telephony infrastructure
Advanced Alcatel-Lucent UC infrastructure components: IM, presence, video, unified messaging, web conferencing, application sharing	Independent infrastructure is compatible with multiple operating systems, providing powerful communications servers and features	Provides flexible deployment options and maximizes communications choices
Accessibility from multiple devices: PCs, desk phones and mobile devices	Enables anytime, anywhere, any device communications	Serves communication needs for users inside and outside the enterprise
Alcatel-Lucent compliance with key standards for Web services, IP security and SIP	Simplifies the integration of best-of-breed software components	Maximizes opportunities for standards-based evolution

Integration with IBM™

The Alcatel-Lucent – IBM Unified Communications and Collaboration joint solutions:

- Increase the productivity of existing business models and enables new modes of operations
- Include collaboration and conferencing capabilities as well as converged telephony and messaging for versatile real-time communications
- Reduce the cost and complexity of adoption through unprecedented interoperability
- Deliver rapid value to users by leveraging trusted platforms and applications

Alcatel-Lucent offers several communication integration options for desktop users of IBM software looking for an evolutionary approach to desktop convergence. From their familiar Lotus Sametime interface, IBM users may access all of the Alcatel-Lucent OmniTouch™ Unified Communications services. These solutions include applications such as audio conferencing, real-time communications, enabled messaging, e-mail and directory systems. The solutions also include integration between Lotus Sametime and Alcatel-Lucent OmniTouch My Instant Communicator™, allowing users to view presence status, access contacts, and respond to incoming calls or IMs with either media.

The Alcatel-Lucent open standards-based solutions for IBM Lotus Sametime and Lotus Notes provide CIOs and IT managers with lower integration and management costs and improved ROI on existing investments with enhanced functionalities. For business line managers, the integration enables increased productivity and the ability to accelerate business processes — leading to greater customer satisfaction and a competitive edge. And finally, these solutions are easy to deploy because they are accessed directly from the users' Lotus Sametime and Lotus Notes familiar interfaces facilitating adoption rates leading to subsequent cost and productivity benefits.

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Solution	Features	Target Customer	Value Proposition
Conferencing for IBM Lotus Sametime and Lotus Notes	• Audio conferencing, scheduling and recording • Click to conference from Lotus Notes, Microsoft Outlook, and Office • Seamless access from Lotus Sametime	• IBM Lotus Sametime users regardless of PBX type • High audio-conferencing costs or a mixed PBX network	• ROI in 6 to 9 months • Works with any PBX • Scalable with 600 calls per server and stacking capability • Competitive offering
Messaging and telephony tools for Lotus Notes and IBM Lotus Sametime	• Unified messaging services • Click to call, call controls, call logging, and softphone • One-number services (call routing and filtering) • Telephony presence	• Alcatel-Lucent OmniPCX™ Enterprise users wanting to leverage their voice network with integrated IBM desktop	• Greater control over telecom costs • Enhanced productivity • Unified access to e-mail, voice and fax messages
My Instant Communicator for IBM Lotus Sametime	• Access and add Sametime contacts from My Instant Communicator contacts • Synchronized presence • Answer voice calls with a Sametime IM • Send a Sametime IM from My Instant Communicator • View telephony presence from Sametime	• OmniPCX Enterprise customers and IBM Lotus Sametime users	• Full desktop convergence

Teamwork services and IBM solutions

Audio conferencing support – Teamwork Services for IBM Lotus Sametime provides carrier-grade, platform-agnostic, multiparty conference capabilities that include ad hoc click-to-conference from Sametime Connect, Lotus Notes, Microsoft Outlook and Office applications, as well as the ability to schedule, record and manage sessions from within Sametime. By managing conferences and collaboration facilities as part of the enterprise, a true solid ROI can be demonstrated in as few as four months over conventional external service provider solutions. And perhaps most importantly, the end-user experience is seamless with access to Teamwork Services directly from Sametime.

The underlying server, the OmniTouch Advanced Communication Server (ACS) provides all audio-conference features to IBM Sametime users, allowing them to start conferences with the option to dial in directly or use the web portal to join. Conferences can support a mix of participants using VoIP and PSTN. In addition, the integration with Teamwork Services provides multi-tenancy, operator console capability for larger capacity conferences in a hosted environment and call control features such as mute/unmute and active talker indication.

From a competitive standpoint, Teamwork Services is the only solution that works with any PBX or softswitch to address IBM customers' heterogeneous networks. It provides a unique recording functionality, and is installed as pure software running on IBM hardware or other hardware, with no proprietary technology needed for a quick ROI and low total cost of ownership (TCO) for the customer.

All of this allows IBM to effectively compete with Microsoft and offer customers a solution with a solid ROI, as well as one that addresses the demands of their multivendor voice network and promotes Sametime upgrades with costs covered in the ROI savings.

Messaging and Telephony support – The Alcatel-Lucent integration enables real-time voice communications so that OmniPCX Enterprise IP PBX telephony controls, presence, one-number services, and voice and fax messaging are all integrated into the IBM Lotus desktop software. IBM users are able to access voice and fax messages, manage their call routing rules, view the telephony presence of their contacts and initiate calls with them — all from their IBM desktop interface.

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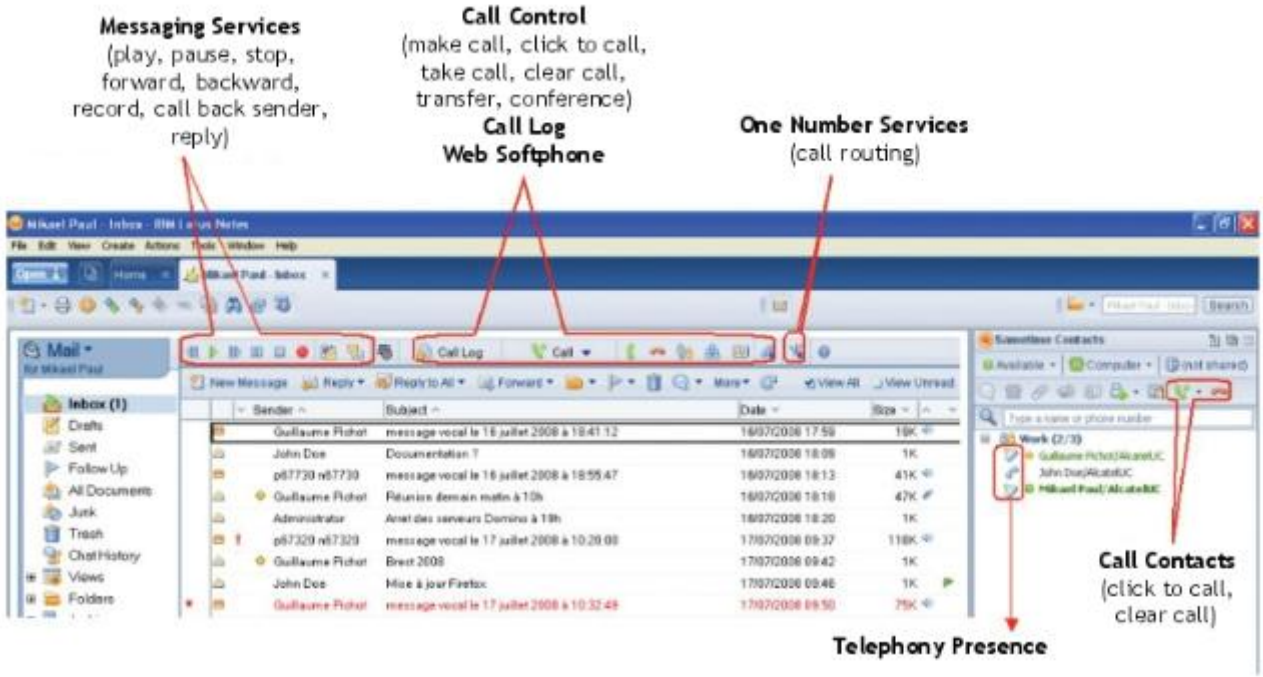

IBM Lotus users have access direct from their Lotus interface to telephony services, one-number dialing, and unified messaging services. The embedded toolbars provide:

- Unified messaging control for combined voice mail, e-mail and fax within the Lotus Domino server store to provide message playback, review and recording on the PC or telephone set
- Make or take a call, transfer, conference, and hang up
- Access to call logs, a web softphone, and one-number services

With the Alcatel-Lucent integration, customers can fully leverage their investment in the IBM Lotus Domino server or any IMAP4-compliant e-mail platforms. From the Lotus Sametime interface and optionally from the Lotus Notes interface, IBM software users can view telephony presence and initiate calls from the contacts list and chat windows.

My Instant Communicator for IBM Lotus Sametime

OmniTouch 8600 MIC provides an innovative yet simple user interface with non-intrusive toast pop-ups, balloons and menu options that allow easy access to communications, applications and user settings. It also provides users unmatched integration capabilities with their business processes, applications, and portals, as well as existing desktop applications like IBM Lotus Sametime. My Instant Communicator resides in the desktop PC system tray, only activated when communication through appropriate media such as IM, fax, e-mail are present.

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The integration of a My Instant Communicator client to IBM Lotus Sametime provides OmniPCX Enterprise and Sametime users with the following capabilities:

- Access and addition of Sametime contacts from the My Instant Communicator contacts list
- Synchronized presence
- Answer incoming voice calls with a Sametime IM chat session
- Open a Sametime IM chat session when sending an IM from My Instant Communicator
- View telephony presence from Sametime

IBM users benefit from the media-blending capabilities of My Instant Communicator: users can perform a directory lookup, check presence information and choose to start an IM session. My Instant Communicator will relay this IM session to the IBM Lotus Sametime interface. In the same manner, users can easily answer an incoming voice call with a Sametime IM.

4.3.1.1.2 MyIC Mobile

The OmniTouch 8600 MIC Mobile, the next evolution of the Alcatel-Lucent My Cellular Extension (MCE) application, delivers advanced unified communication services to a wide range of single-mode (cellular) devices:

- RIM BlackBerry®
- Apple® iPhone™
- Nokia® E-Series
- Microsoft Windows Mobile® 6.x
- Google® Android™

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OmniTouch 8600 MIC Mobile allows users to stay business-connected, anywhere. This Alcatel-Lucent solution improves personnel accessibility and productivity by keeping people connected anytime and anywhere, as for instance:

For immediate expert or support assistance you can perform a directory lookup and thanks to contact presence information, easily select the best media for your communication.

When leaving an airplane, you can see what business communications took place by checking voicemail. Did you miss any calls? See missed calls or callback requests and instantly call people back.

Need to evaluate contract negotiations with your boss or direct reports? Choose the media that suits you best, voice, email, or Instant Messaging for speed, confidence, and discretion.

OmniTouch 8600 MIC Mobile extends customer IP Telephony systems to cellular coverage zones and leverages their wireless LAN infrastructure to reduce on-site/off-site mobile communication cost – Delivers enterprise communication services to a wide range of single-mode (cellular) and dual-mode (cellular/WiFi) devices, including Microsoft Windows Mobile®, Nokia EseriesTM, RIM BlackBerry®, Apple® iPhoneTM and Google® AndroidTM.

BlackBerry Graphical User Interface

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Nokia graphical user interface

iPhone graphical user interface

Windows mobile graphical user interface

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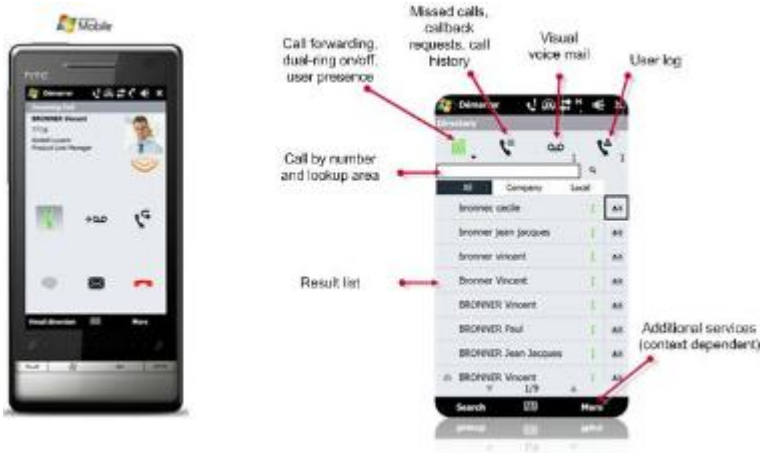
Missed calls, callback requests, call history
Visual voice mail
User log
Call forwarding, dual-ring on/off, user presence
Call by number and lookup area
Result list
Additional services (context dependent)

Android graphical user interface

Call by number and lookup area
Missed calls, call back requests, visual voice mail
Call history
Call forwarding, dual-ring on/off

4.3.1.1.3 Collaboration Services

Teamwork Services is a software-based multimedia, multiparty business communications solution running on commonly available computer hardware. Install OmniTouch Teamwork Services within any network and access from any telephone, any location, and any browser for secure conferencing with anyone inside or outside the company. The presence-aware, easy-to-use interface supports a full feature set including meet me, ad-hoc, and scheduled events with click-to-conference, IM chat, application and desktop sharing, document management, point-to-point integrated video, and more.

Teamwork Services combine presence-aware instant messaging with the ability to make phone calls, schedule and host conference calls, share applications or desktop, and view presentations. Teamwork Services runs in a standard Web browser and does not require any specialized software.

To use Teamwork Services, you create a list of contacts, that is, other people who use Teamwork Services. You can then send an instant message or place a phone call to each contact by double-clicking one of the icons that appear next to each contact's name.

With Teamwork Services you can:

- Make phone calls and conference calls
- Escalate an instant message to a phone call

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- See who is online and who is on the phone
- Participate in video conferences
- Access conversation archives with instant messaging logs, including participant list and the media used
- Share your desktop or applications with others
- Make presentations and upload attachments
- Conduct polls
- Control who can see when you are online and who can send you messages

4.3.1.1.4 Visual Collaboration

The Alcatel-Lucent OpenTouch offer introduces the opportunity to use video with ease and simplicity. The options for video depend on the requirements of the client. These can be simply to be used for presentations where one camera is required and the image is distributed to a groups or groups of people.

The requirement can be to view the called and calling parties. This becomes more complex when a group of video clients are required to connect at the same time.

The choices can all be satisfied by the offer.

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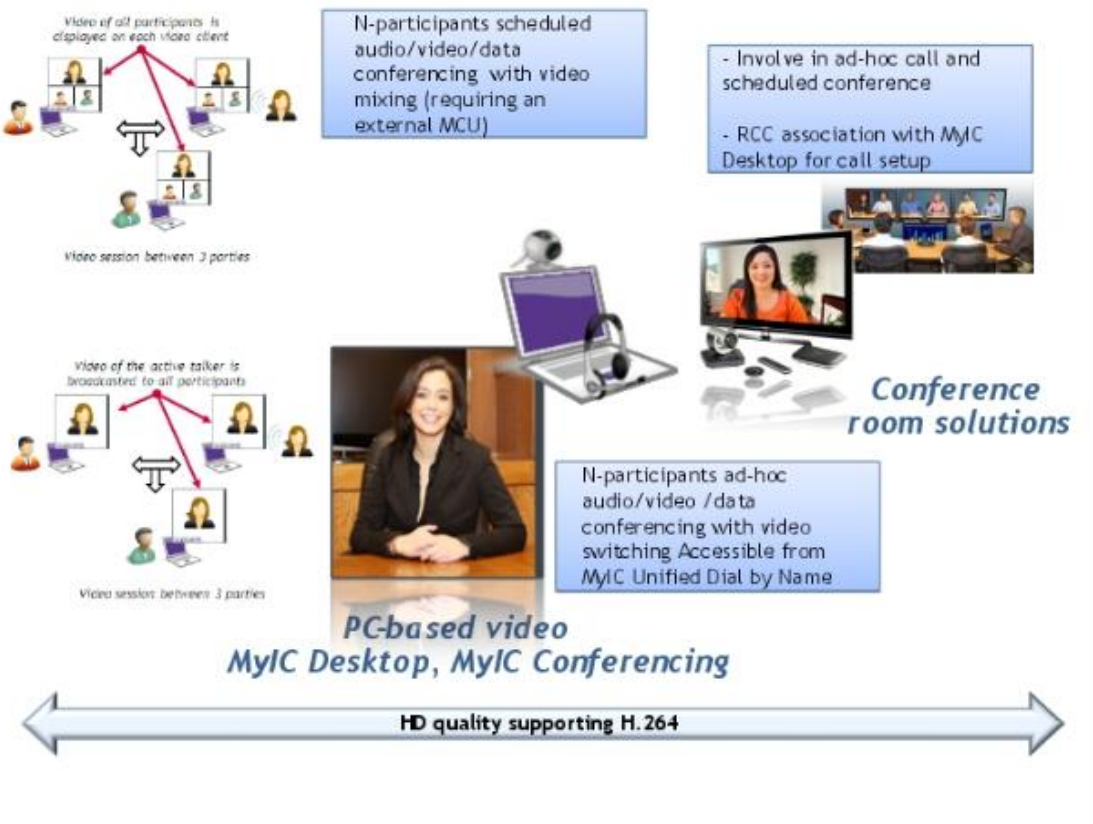
Video of all participants is displayed on each video client
Video session between 3 parties
N-participants scheduled audio/video/data conferencing with video mixing (requiring an external MCU)
- Involve in ad-hoc call and scheduled conference
- RCC association with MyIC Desktop for call setup
Conference room solutions
Video of the active talker is broadcasted to all participants
Video session between 3 parties
N-participants ad-hoc audio/video /data conferencing with video switching Accessible from MyIC Unified Dial by Name
PC-based video
MyIC Desktop, MyIC Conferencing
HD quality supporting H.264

Video services provide the capability to offer video media as a complement to audio media for telephony services.

Services provided include:

- Peer to peer audio and video communication
- Conferencing including audio and video (ad-hoc, schedule conference, using built-in Multipoint Control Unit (MCU) or third party MCU)

OpenTouch Communications can combine one or several media:

- Audio only
- Audio and video
- Audio and data sharing
- Audio, video and data sharing

There are different ways of establishing video communication from MIC Desktop client:

- **Peer-to-peer** session between two endpoints (e.g. MIC Desktop). Peer to Peer is based on Direct RTP. Neither Software nor Hardware MCU is required for the video unless there is a codec mismatch and transcoding is required. The quality and performance depends on network configuration and video equipments (codec/webcam)

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Video session between 2 parties

- **Ad hoc conferencing** (immediate or on the fly): this is an unscheduled conference which requires no advanced preparation. This type of conference is initiated:
  - by selecting several contacts through a user interface (e.g. from MIC Desktop or MyTeamwork client) and pressing call button (e.g. from Phone)
  - or by calling additional people during a communication.

    Casual, immediate, on the fly, 3 ways, 3 party or 6 party conference operate in the same way as Ad hoc conferences. No conference identification is provided or required. No conference resources are reserved. They are acquired from a pool of resources.. If no resources are available, the conference will not be established.

- **Scheduled conferencing**: this is a conference organized in advance where:
  - The date, time and duration are defined
  - Resources (audio, data and/or video ports) can be reserved
  - A conference identification (access code) is generated

    To create the scheduled conference, the organization requires:
    - A phone number (and/or an URL) is configured by the administrator to join the conference bridge
    - An email invitation is created with the previous information destined for all attendees
    - Attendees have to join the conference using the phone number (and/or the URL) and the access code received in the invitation
  - When the conference is ended the conference identification (access code) is no longer valid

  The embedded OpenTouch Conferencing or MyTeamwork application can be used to create this type of conference.

- **Meet me** conferencing is a "reservationless" conference organized in advance and with a infinite validity. However, there is no reserved resource. A permanent conference identification (access code) is created.
  - The Meet me conference is created with:
    - A phone number (and/or an URL) is configured by the administrator to join the conference bridge
    - An email invitation is created with the previous information destined for all attendees
    - Attendees have to join the conference using the phone number (and/or the URL) and the access code received in the invitation

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- The conference is still reusable using the same access code

For Meet me, scheduled conferencing and ad-hoc conferencing with more than 3 participants, the MyIC Conferencing license option is required.

There are two principle methods of video conferencing:

- Video switching (selective presence)
- Video mixing (continuous presence)

Note : Depending on the video communication requirements, CPU processing requirements can differ. A video MCU is needed for multi-party video conference with continuous presence.

Video Switching (selective presence)

Selective Presence means that only one camera is active at any specific time, for example, in the case of a presentation where the speaker is seen by all the audience members.

Video can be provided by a software or a hardware solution with an MCU.

With a software solution:

- All participants must be running with the same codec No codec conversion is possible
- No resolution adaptation
- No framing modification

If an MCU is included in the configuration, the video activation can include VAD (Voice Activity Detection). This means that each active speaker activates their specific camera. H264 protocol is based on periodic reference frame (image) followed by updates. When the speaker is changing, the system switches on the new speaker and displays him/her as well.

To ensure the image quality on each of the video end points, all the video client should have the same configuration in terms of supported codecs, resolution and framing.

Video mixing (continuous presence)

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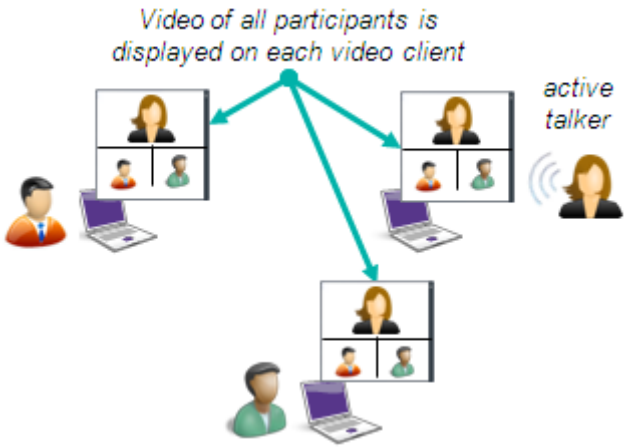

The CPU consumption is greater than peer to peer video and Switched presence, and so specific hardware is needed to manage and display the single composed image.

Dynamically, it is possible to have:

- Codecs conversion (transcoding)
- Resolution adaptation
- Framing modification

In addition to video collaboration solution on PC and in partnership with major actors of the videoconference market, Alcatel-Lucent offers:

- Full HD (1080p) visioconference facilities to ensure optimum conference room (including bridge)
- Multipoint Control Unit (MCU)
- Telepresence (HD video on a one-to-one scale)
- ISDN compatibility for external connections on ISDN
- Firewall management for IP external connections
- Administration solutions to pilot and configure all devices from a central platform
- Recording platform for video streaming

4.3.1.2 Fax Services

Fax Services integrate seamlessly with Voice over IP (VoIP) technology and the T.38 fax relay capabilities of leading Alcatel-Lucent VoIP gateways, thus enriching unified messaging with fax communication in addition to e-mail and voice messaging.

Key benefits

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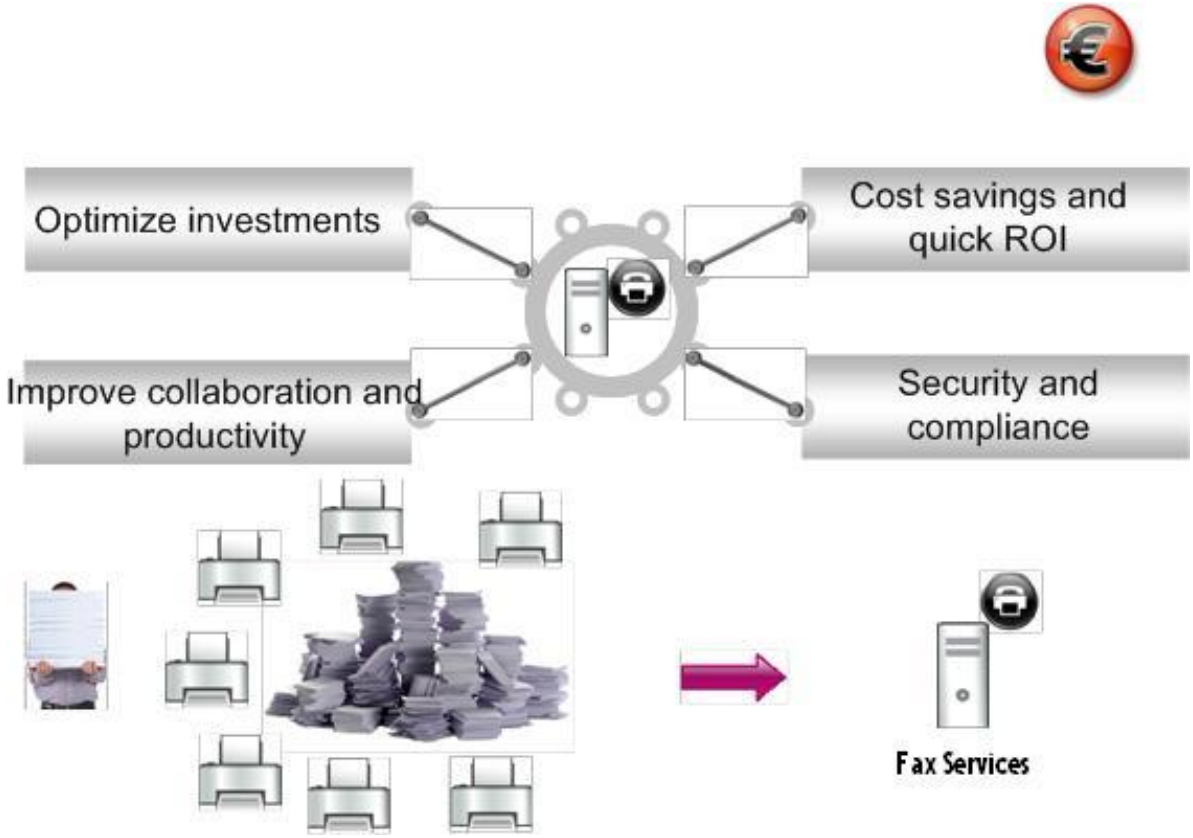

Hardware-agnostic and easy to deliver thanks to a pure software solution:	• Provides seamless OmniPCX Enterprise integration and virtual machine support through the OpenTouch™ business Edition
Improves collaboration & productivity:	• Manages large fax volumes and delivers high levels of scalability, reliability and availability • Offers document communication, processing & storage • Streamlines business workflow • Improves presence, collaboration and customer interaction, anywhere, anytime
Cost savings & ROI:	• Reduces ongoing fax machine related costs • Eliminates junk faxes, reduces printing • Reduces energy consumption to advance Eco-sustainability initiatives • Reduces single purpose fax hardware and analog circuits
Facilitates security & compliance:	• Routes sensitive documents to designated recipients • Provides an audit trail of transactions

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4.4 Mobility solutions

4.4.1 On Site mobility

4.4.1.1 Introduction

No matter what the size and activity of a company, mobile communications remain an indispensable application in a business environment.

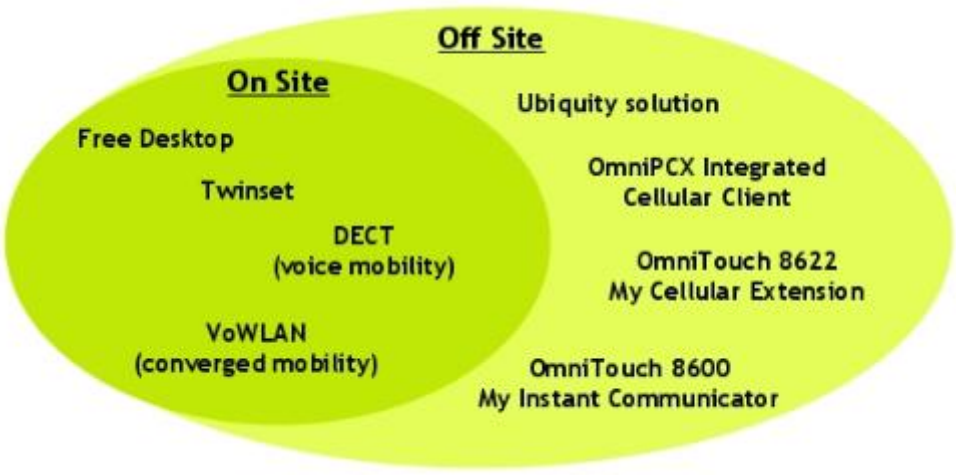
To improve the productivity and efficiency of their staff, companies are led to offer them the most adapted communication tools when they have to move in and out of their office. In typical company premises, leaving your office can result in missing contacts and information. When leaving company premises, more appointments and opportunities can be missed.

The challenge of mobility is to use applications normally limited to the office (voice and data) in a mobile configuration, whatever the technology or devices used.

To meet this important business requirement, Alcatel-Lucent offers global mobility solutions for enterprises. This product line of mobility applications provides businesses with unique organizational and working environment flexibility, allowing constant adaptation to ongoing changes and developments in business practices.

Enterprises can now offer a "virtual office" approach for employees, with all associated benefits and advantages.

Alcatel-Lucent offers a large range of mobility services to employees moving within or out of company premises:



To meet the need for mobility for corporate employee within company premises, Alcatel-Lucent offers:

- A voice mobility service fully integrated into the Alcatel-Lucent Enterprise and based on:

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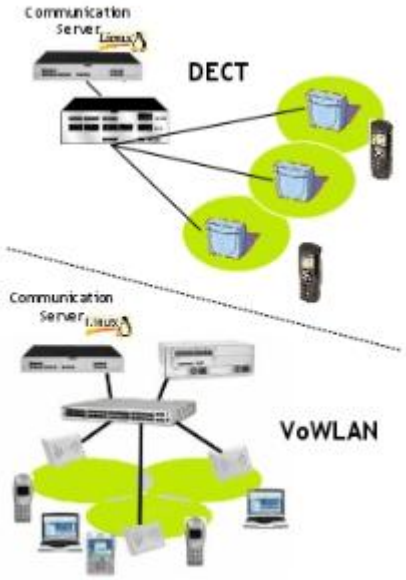
- A product line of **DECT** and **VoWLAN** radio base stations covering all requirements in terms of traffic or radio coverage
- A line of professional DECT and WLAN wireless devices supporting the OmniPCX Enterprise services and addressing mobility needs for on-site roamers: be they blue-collar or white-collar workers, or managers



The European DECT standard is the traditional voice mobility system, based on proven and price attractive digital cordless technology while the wireless LAN radio standard is the converged voice and data mobility, based on a powerful and innovative VoWLAN technology.

- A **Twinset** service allowing employees to associate their desktop phone to an Alcatel-Lucent DECT handset. This service provides:
  - Two multiline phones with one single call number, which is the DDI number of the main phone
  - User notification of all incoming calls on the twinset (ringing or bip tone)
  - Ability to call the secondary set with a specific directory number
  - Services activation on one of the sets is automatically taken into account on the other: voice mailbox, forwarding activation/cancellation, Manager/Assistant filtering

- A **Free Desktop** service allowing staff, equipped with several devices and applications (telephone extension, PC, unified messaging, etc.), to move within the company easily, while preserving their work environment.

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Users regularly connected from their office may need to recover their telephone environment when they temporarily move to a meeting room, another office

The Free Desktop service is activated either:

- From a free desktop telephone or IP Desktop Softphone of the company (easy login/logout)
- Or a Web-based mobility interface

When the service is activated on desktop phones, people automatically retrieve their telephone profile (directory number, number barring, pre-programmed keys, etc.).

4.4.1.2 Voice over Wireless LAN

OmniTouch WLAN handsets

OmniTouch WLAN Handsets are fully integrated in the Alcatel-Lucent OmniPCX Enterprise Communication Server and offer a set of communication services. Available during conversations or from the idle state, these services are easily activated to improve the communication capabilities in business environments.

Access to the Alcatel-Lucent OmniPCX Enterprise Communication Server services

The Alcatel-Lucent OmniTouch 8118/8128 WLAN Handsets use the Alcatel-Lucent New Office Environment (NOE) protocol, are fully compatible with the Alcatel-Lucent OmniPCX Enterprise Communication Server and access services transparently.

Note 1: For current OmniTouch 8118/8128 WLAN Handset details and specifications, see Mobile Telephones

During conversation, menus can be used to activate current IP phone call capabilities such as:

- Consultation/Enquiry
- Broker call/Three-party conference
- Transfer
- Activation of one programmable key
- Callback request

When the phone is not in active use, menus are available to deal with working requirements to manage:

- Call forwarding
- Last caller callback
- Last number redial
- Call pickup

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- Waiting call consultation
- Call Park/Retrieve
- Do not disturb
- Wake up/Appointment reminders
- Room status management
- Suite Wake up
- Password modification
- Meet me conference call organization
- Hunt group participation
- Voice mail consultation
- Business account code management
- Associated Set modification

Note 2: The preceeding lists are not exhaustive. For more details see the OmniPCX Enterprise Communication Server feature list.

Messaging example

Messages are indicated with the presence of an envelope icon.

By using the Menu button, Messaging can be selected. In this example, one voice mail message and one callback request are present. When the personal code is validated access to the messages is granted.

Alcatel-Lucent offers the industry's most versatile and complete wireless solution for the workplace. Mobile IP Touch Wireless Telephones are designed for a broad range of enterprise applications, from general office to industrial use.

The Alcatel-Lucent OmniTouch 8118/8128 WLAN Handsets provide:

- Time saving benefits for voice and data applications
- Alcatel-Lucent proprietary protocol phone services such as caller name display for phone book members
- Excellent voice quality throughout the workplace
- Improvements for mobility, responsiveness, and productivity

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The lightweight OmniTouch 8118/8128 WLAN Handset are extremely simple to use, require minimal training, and are durable enough to withstand the rigors of workplace use. The rugged design has no moving parts or external antenna. A complete set of accessories is available including headsets, chargers, and carrying cases. OmniTouch 8118/8128 WLAN Handset offer more than just telephone communication.

A push-to-talk functionality is available with the Alcatel-Lucent OmniTouch 8128 WLAN Handset to broadcast communication between employees, eliminating the need for two-way radios or walkie-talkies. By putting Wireless to Work, Alcatel-Lucent has helped many commercial enterprises to improve productivity, responsiveness, and customer service.

Alcatel-Lucent's enterprise telephony integration capabilities, standards-based wireless architecture, excellent voice quality, and portfolio of handsets make Mobile IP Touch wireless telephones the right choice for wireless LAN telephony.

The Alcatel-Lucent OmniPCX Enterprise Communication Server R10 supports configurations without any additional servers for WLAN handsets in an Alcatel-Lucent WLAN infrastructure. The Alcatel-Lucent OmniTouch 8118/8128 WLAN Handsets support:

- 802.11e Wi-Fi Multi Media (WMM)
- Enhanced Distributed Channel Access (EDCA)
- WMM Power Save (U-APSD)

Call Admission Control is based on TSPEC & WMM Admission Control (AC). Alcatel-Lucent OmniTouch 8118/8128 WLAN Handsets are also CCXv2 compliant.

With the implementation of Direct RTP and New Office Environment (NOE) protocol on Alcatel-Lucent OmniTouch 8118/8128 WLAN Handsets , calls are handled transparently and as a result they are able to communicate with every other set in the same way as an IP Touch set.

Note: For details about OmniTouch 8118/8128 WLAN Handset compatibility, refer to the "Alcatel-Lucent OmniTouch 8118/8128 WLAN Handsets on Specific WLAN Infrastructures" Premium Customer Support available on the Enterprise Business Portal.

The following diagrams indicate the call progression from an Alcatel-Lucent OmniTouch WLAN Handset Site A to another Alcatel-Lucent IP Touch WLAN Handset in site B via a WAN and without additional compression/decompression.

Reminder: IP Domains are used to perform CAC control on WAN:

- *G711 in Intra-domain (Sites A & B)*
- *G729A in Extra-domain (WAN)*

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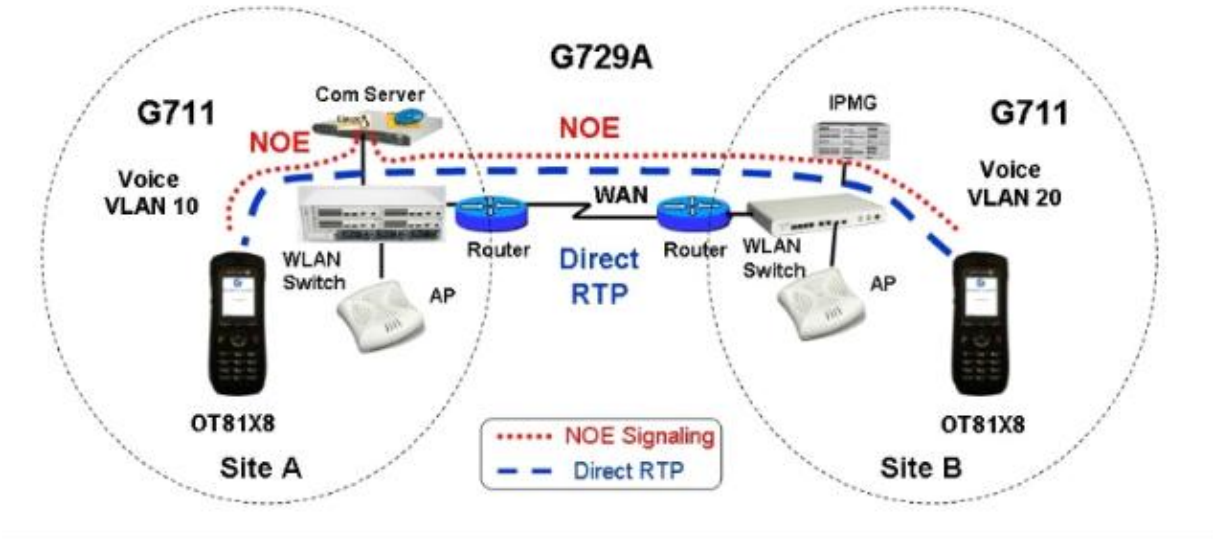

Direct RTP between two sites (OT8118 & OT8128)

In a Site to Site configuration, a call between two OmniTouch WLAN handsets (OT8118/OT8128) is treated as an IP Touch phone call with the implementation of Direct RTP. The G711 algorithm is used for local communication on each site, G729A is configured on the WAN to reduce bandwidth consumption.

Security

Wifi sets are able to support the WPA2 security mechanism. This protocol is based on the final IEEE 802.11i amendment of the 802.11 standard.

WPA2, like WPA, has two operational modes: Enterprise and Personal.

- Enterprise mode uses:
  - PEAP-MSCHAPv2
  - EAP-TLS
  - EAP-FAST
- Personal mode:
  - Based on a PreShared Key model, WPA2, like WPA, creates a new session key at every association.

The encryption keys used for each client are unique on the network and specific to each client. Ultimately, every client sends packets over the air, encrypted with a unique key. WPA2 is more robust than WPA. WPA2 uses the AES encryption algorithm instead of RC4 Security (used by the first version of WPA).

Rogue AP detection is performed by the WLAN controller.

Site requirements

The existing WLAN infrastructure must be studied for compatibility with the WiFi telephony. This includes the following tasks:

- All WLAN products must be part of a certified list for compliancy.

  Refer to the "Alcatel-Lucent OmniTouch 8118/8128 WLAN Handsets on Specific WLAN Infrastructures" available on the Business Portal.

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- The topology has to be studied in order to ensure enough bandwidth for voice communication.
- The IP scheme used (L2 and L3) needs to be analyzed to fit the architecture.
- To ensure correct RF coverage for providing seamless handovers, a Voice site survey is mandatory.

4.4.1.3 DECT

To meet corporate user mobility requirements in company premises, the Alcatel-Lucent OmniPCX Enterprise Communication Server offers a wireless telephone service based on the international DECT (Digital Enhanced Cordless Telecommunications) standard.

The DECT standard is a cellular technology that uses the 1880/1900 MHz frequency band. DECT is available:

- In all European countries
- In a large number of Asian and African countries. The 1900/1930 MHz bandwidth is used for China, Thailand and Latin American

The DECT standard is designed to provide mobility services in environments with high user density such as large buildings or campuses: 10 000 Erlangs/Km sq. (GSM 200 Erlangs/Km sq., DCS 500 Erlangs/Km sq.).

This standard is based on a digital technology providing high quality communication, with Roaming and Handover (Handoff) capabilities.

CDCS (continuous dynamic channel selection) is a unique feature that ensures that every mobile phone operates on the best available radio channel. In addition, no frequency planning is required when adding a radio base station. All base stations can transmit on any channel.

The Alcatel-Lucent OmniPCX Enterprise Communication Server integrates mobility components based on the DECT technology, offering ergonomics, security, and user-friendly management.

The DECT wireless solution is fully integrated with the Alcatel-Lucent OmniPCX Enterprise VoIP & TDM solutions. A DECT (Digital Enhanced Cordless Telecommunications) set is seen as a TDM UA set using the AGAP (Alcatel-Lucent Generic Access Profile) protocol.

The DECT mobility service is built by connecting DECT radio base stations to the Alcatel-Lucent OmniPCX Enterprise. This infrastructure offers indoor and/or outdoor radio coverage enabling any DECT handset to be connected to PCX services and applications, and to operate as any other proprietary extension of the OmniPCX Enterprise.

The DECT phone set is a mobile device that the user can use as they move around. Using their DECT handset, the user can make or receive calls and also use phone services in the same way as UA Reflexes (digital) telephone users.

The base station is the radio interface between the DECT handset and the PCX which provides the corporate phone services. An individual base station has a range of approximately 300 m in a free geographic area. This area is referred to as a "cell" and the combined group of cells is referred to as the "coverage area." An OmniPCX can support several base stations

The DECT solution offers user mobility and roaming services to make a call and then physically move from one cell to another cell through the company coverage area. The PCX maintains each call during handoffs between cells.

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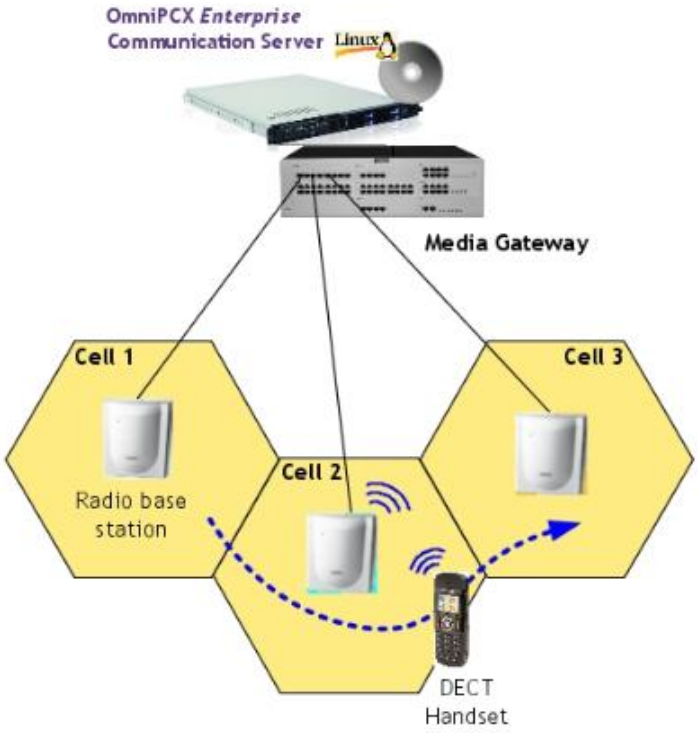
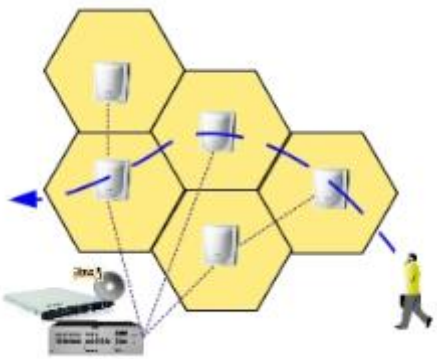
Alcatel-Lucent DECT products offer optimized base stations:

- Intelligent Base Station (IBS) available in two versions: indoor (4070 IO) and outdoor (4070 EO). IBS can be connected to UA boards (Crystal Hardware) or UAI/MIX boards (Common Hardware) allowing up to 6 simultaneous calls
- A line of professional DECT wireless devices called Alcatel-Lucent 8232 DECT Handset and Alcatel-Lucent 400 DECT Handset. These Alcatel-Lucent DECT Handsets offer access to the same OmniPCX Enterprise voice services as TDM desktop phone sets

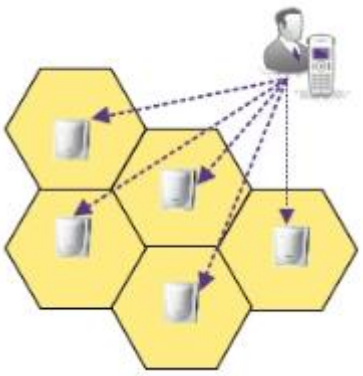


OmniPCX Enterprise DECT environment

Alcatel-Lucent DECT products provide an optimal traffic capacity, a high voice quality and seamless roaming and handover between cells:



Handover: During a conversation, a mobile user can move within the company premises without any cut or interference.



Roaming: A mobile user can make or receive calls from any location in the PCX radio coverage area. The DECT handset is always synchronized with a radio base station and is able to change

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from one base station to another.

To cover a site, radio base stations, connected to the OmniPCX Enterprise, are mounted to create a private cellular network.

A radio coverage survey is necessary and must be conducted to define the number of base stations needed at specific locations. All internal calls are free of charge. External calls bear the same cost as calls from any wired phone.

The signalling for the base station and the DECT sets is included in the media gateway signalling. For each media gateway, the signalling bandwidth needed is about 9.6Kbps for 250 users. The protocol used is UA signalling end to end.

4.4.1.4 DECT HANDSETS

The Alcatel-Lucent DECT telephony offers the following products:

8232 DECT Handset

400 DECT Handset

500 DECT Handset

This product line, fully compatible with existing indoor and outdoor Alcatel-Lucent base stations, is based on three products (Alcatel-Lucent 8232/400 DECT Handsets) and the Mobile DECT 500.

The Alcatel-Lucent 8232/400 DECT Handsets are designed to suit the voice requirements of employees who are away from their office. They offer access to the same added value voice services as Alcatel-Lucent fixed desk digital phones. The two products benefit from an improved usability through functions like backlight display and a vibrate mode.

Note: In addition to these handsets, Alcatel-Lucent can provide two other models of DECT:

- *Alcatel-Lucent Alcatel-Lucent 300 DECT Handset Ex for environments with explosive risks*
- *Alcatel-Lucent Mobile DECT 500 for isolated workers in harder physical conditions or explosive environments*

4.4.2 The Cellular extension

As an addition to the remote extension offer, Alcatel-Lucent OmniTouch 8622 My Cellular Extension (MCE) enhances an individual cellular device with OmniPCX key features.

The major benefits are:

- Familiar phone handling – habitual user phone
- Alcatel-Lucent OmniPCX Enterprise Communication Server call handling possibilities

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- Reduced Long distance and international phone charges

4.4.3 The Free Desktop Environment application (optional)

Alcatel-Lucent Free Desktop Environment is available in two formats:

- A standard application solution, provided with the Alcatel-Lucent OmniPCX Enterprise Communication Server which caters to the needs of **Free Seating**
- An advanced and customized solution, based on the standard solution, requiring a precise analysis of client needs and implemented by Alcatel-Lucent's Professional Services. This solution is usually integrated in the user business applications

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5 Customer interaction

5.1.1 Attendant Services

The Alcatel-Lucent OmniPCX Enterprise Communication Server offers a wide range of attendant solutions to welcome customers:

An entry level solution consisting either in:

An Alcatel-Lucent IP Touch 4068 phone Extended Edition set used as an attendant set.

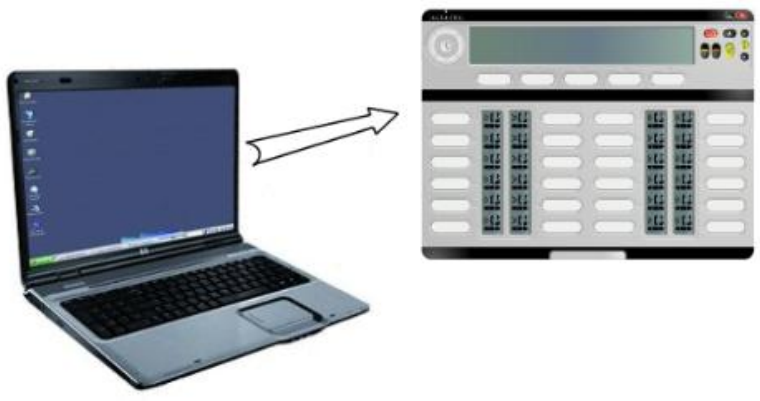
Alcatel-Lucent IP Touch 4068 phone Extended Edition attendant set

Its context-sensitive softkeys provide a user-friendly access to attendant facilities for efficient management of incoming and outgoing calls.

The attendant service on Alcatel-Lucent IP Touch 4068 phone Extended Edition is fully compatible with:

- The Smart Display Module (up to three Smart Display Module with 14 keys each can be connected to a set)
- The IP Touch security feature
- Display of long names and names in non-Latin characters (UTF-8 standard)

An Alcatel-Lucent IP desktop attendant Softphone.



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IP desktop attendant softphone

The Alcatel-Lucent IP desktop attendant Softphone runs on a computer and emulates an Advanced Reflexes 4035 Phone set. This multi-skin software application efficiently replaces the physical desktop set and provides the same level of features as Advanced Reflexes 4035 Phone configured as an attendant.

Features:

- Skinnable user interface
- Emulated UA phone keys
- UA display
- Automatic voice switch to a USB headset when connected, ringing through computer speakers
- Up to 15 different ring tones
- Programmable keys
- LED signaling using the appropriate skin
- QOS tickets generation
- DTMF tones
- Shortcut customization
- Several screen sizes: bar, with or without directory keys
- Using WinRTP as RTP stack, extended to support G723.1/G729 codecs

A **multimedia professional attendant solution**, allowing attendant to switch between telephony applications and Windows applications at any time. The full IP solution is provided by one of the following Alcatel-Lucent 4059 offers:

An Alcatel-Lucent 4059 IP attendant console including:

- An associated Alcatel-Lucent 8/9 series set used for voice (IP or TDM)
- A standard PC running the 4059 IP Attendant Application (with a Busy Lamp Field (BLF) option)
- An ergonomic telephony keyboard with LEDs, shortcut keys, and USB connection

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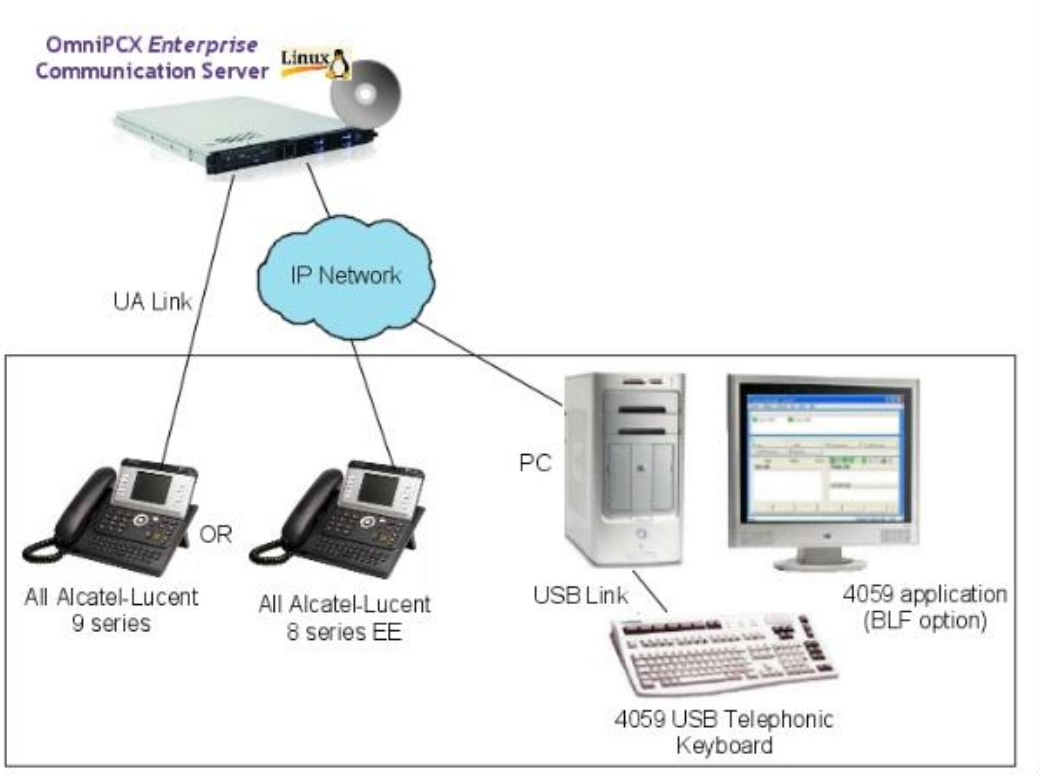
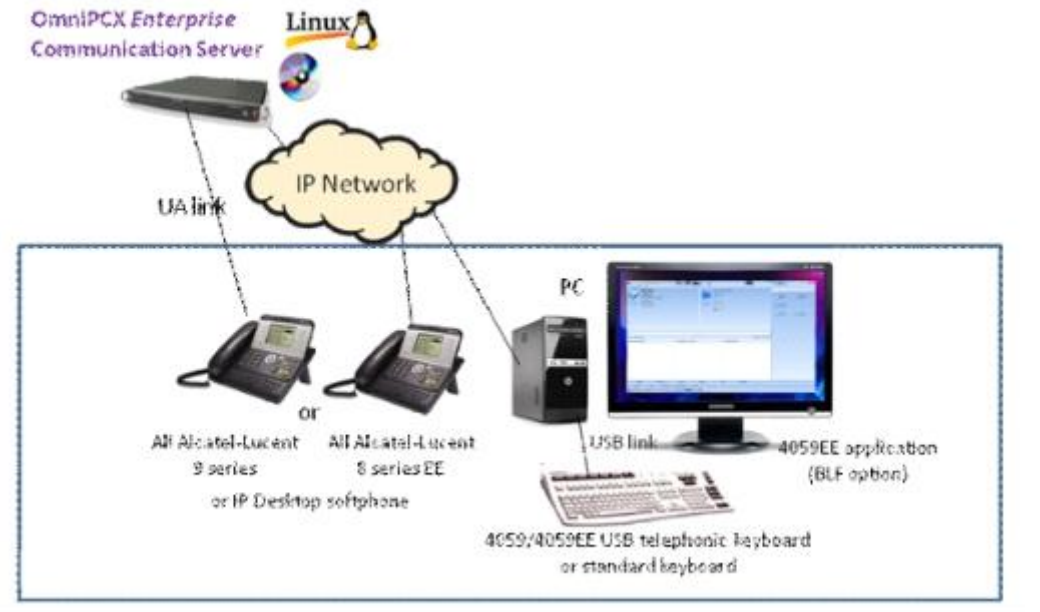


Alcatel-Lucent 4059 IP attendant console

or

<u>An Alcatel-Lucent 4059 Extended Edition attendant console (4059EE) including:</u>

- An IP Desktop Softphone emulating an Alcatel-Lucent IP Touch 4068 Phone for voice
- A standard PC running the 4059 Extended Edition Attendant Application (with a Busy Lamp Field (BLF) option)
- An ergonomic telephony keyboard with LEDs, shortcut keys, and USB connection or a standard PC keyboard



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The Alcatel-Lucent 4059 Extended Edition Attendant Console is a new design of the 4059 IP application. It provides a modern graphical user interface and new software architecture ready to integrate unified communications features.

Note 1: The following descriptions apply to both Alcatel-Lucent 4059 IP and Alcatel-Lucent 4059 EE , any differences are mentioned.

The Alcatel-Lucent 4059 IP and the Alcatel-Lucent 4059 Extended Edition are Attendant Console applications that run on Windows® XP or Windows® 7. They are connected to the OmniPCX Enterprise Communication Server through the IP network.

The PC is not solely dedicated to this application and can handle telephone applications and business software simultaneously.

In addition, the application can be combined with other Alcatel-Lucent software such as the OmniVista 8770, OmniVista 4760and BLF (Busy Lamp Field) (4059), as well as other market software (TAPI or non-TAPI), such as PIM, e-mail, agenda, scheduler, directory, etc.

The Alcatel-Lucent 4059 EE application can be combined with the BLF (Busy Lamp Field) and offers a set of APIs that will be extended in future versions.

Features:

- Access controlled by login procedure, 12 keys for basic call handling
- Screen setting: busy lamp field for extensions, trunks, bundles
- Directories at PC level (Alcatel-Lucent 4059IP): Internal/external directories, company directory, multi-criteria search, etc.
- Directories at PC level (Alcatel-Lucent 4059EE): Internal directory
- Automatic screen pop-up on incoming or outgoing calls, direct caller/called party mini-message display on screen

Characteristics:

- Open client/server architecture
- Win XP® SP3, Windows® 7 compliant application
- Fully compliant LDAP client: universal call-by-name in LDAP/ODBC databases(Alcatel-Lucent 4059IP)
- Directory pop-up: manual/automatic, call type dependent, content customizable(Alcatel-Lucent 4059IP)
- Drag and drop automatic dialing
- Import/export from Excel to operator personal phone book (OLE interface) (Alcatel-Lucent 4059IP)
- Inter-working with other Windows TAPI applications (Alcatel-Lucent 4059 Only)
- Non-dedicated PC. Minimum configuration: Pentium 1.5 GHz or equivalent, 2GB RAM, 4 GB disk space, DVD-ROM drive
- Screen graphics minimum 1280*1024 true color for the Alcatel-Lucent 4059EE

An Automated Attendant (AA)

The enterprise welcome service (Automated Attendant) is an essential service to handle external (or internal) calls. It allows a caller to be guided to the correct company department or user, and it

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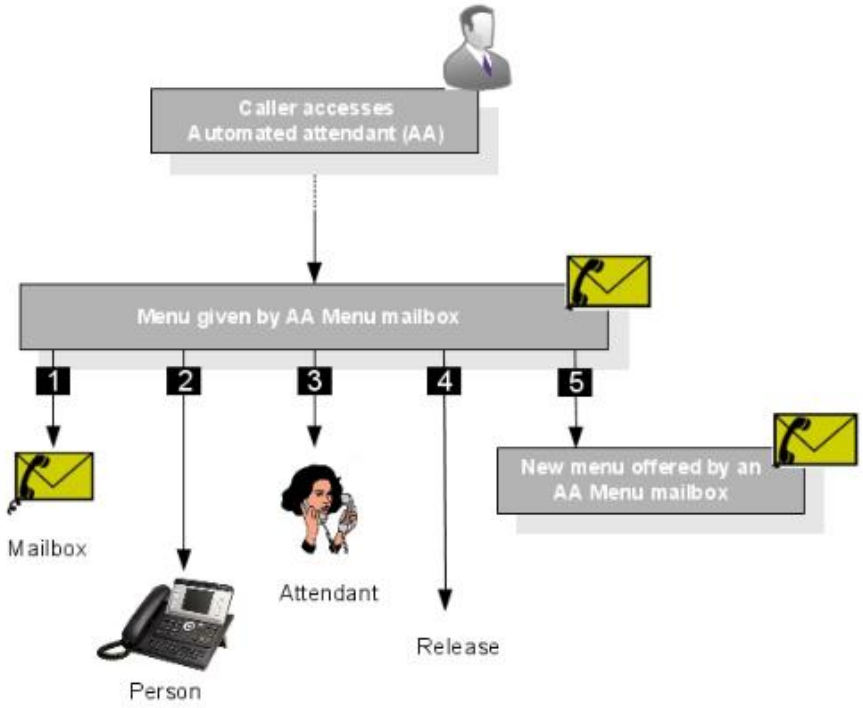
may also be used to assist attendants when there are too many simultaneous calls.

In all cases, the purpose is to ensure that no call goes unattended.

The flexibility of the automated attendant system allows to define a complete set of rules regarding the points of entry into the company and to implement them efficiently.



Advantages:

- Relieves the attendant of simple and repetitive tasks
- Available round-the-clock, every day of the year
- Offers constant high-quality greetings

5.1.2 Contact centers

The Alcatel-Lucent OmniTouch CC suite is a comprehensive and constantly evolving software suite. It starts with **EasyContact**: the Alcatel-Lucent Enterprise Greeting Center and can be enhanced with features covering advanced greeting needs, providing the ability to expand and adapt to large communication flows.

The Alcatel-Lucent OmniTouch CC suite consists of the following contact center solutions:

- The EasyContact package solution is designed for greeting centers. All companies have to improve customer service (internal or external) and optimize call handling, but not all companies can afford to fully dedicated resources or have the time for precise call supervision and traffic reporting.

  The EasyContact pack is a simple, comprehensive, and professional greeting solution, dedicated for small groups of people. This solution is fully embedded in the OmniPCX Enterprise.

- The Alcatel-Lucent OmniTouch Contact Center - Standard Edition is the ideal solution for

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needs related to voice communications. Alcatel-Lucent OmniTouch Contact Center - Standard Edition can run from 5 to 1000 agents in a single node and more for multi-node configuration. Since contact center router and database are embedded in the OmniPCX Enterprise, Alcatel-Lucent OmniTouch Contact Center - Standard Edition supports several important features:

- High availability—for inbound with main and back up communication servers
- Branch survivability for inbound with passive communication server
- Short deployment and fast reactions to business changes

No programming skills required for business managers to become autonomous. It is a modular suite which includes the following components:

- **CCDistribution** (Contact Center Distribution) is the core of the solution. It is based on the unique matrix call routing model (Contact Center WYSIWYG) and is fully embedded in the OmniPCX Enterprise. It provides efficient call routing and distribution to the most suitable agent (matrix-based group skill mapping)
- **CCSupervision** (Contact Center Supervision) is the all-in-one application for real time supervision, system configuration, alarm signalling, statistics compilation and detailed Excel-based reporting. With the CCsupervision all-in-one management tool, supervisors can truly manage contact center operations with a unique graphical interface
- **CCAgent** (Contact Center Agent) is a phone desktop application running on a computer, allowing agents to handle calls from the Contact Center
- **CCoutbound** is a dialer and campaign management application designed to build a fully featured telemarketing center
- **Wallboards** are made of LEDs offering optimized information visibility, with RS232 and Ethernet connection. Wallboard Manager applications provide rich features (e.g. real time information on the Contact Center activity) driven by a dedicated ergonomic management tool for LED wallboards, Panel PC or TV screens

A specific package: the OmniTouch CC Welcome, consisting of several Alcatel-Lucent OmniTouch Contact Center - Standard Edition components, referred to as the Starter package, is designed to suit the special needs of small and medium-sized companies. This integrated solution meets the challenge of providing advanced single-site distribution features at an attractive price, in order to face the very same challenges as many larger businesses.

The OmniTouch CC Welcome can include up to 25 agents and 3 single-site CC supervisors. It starts with a five agent call center. The number of agents may be increased with an on-demand call center that addresses peak period loads in the most efficient way.

Easy migration towards a the complete contact center version, including all the modules of the OmniTouch suite is guaranteed. This allows end-users the capability to upgrade their configuration at their own pace to include more agent positions, interactive voice response, networking and campaign management.

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6 Unified management

Telecom managers need flexible network management tools to deal with the challenge of staying current with today's network and telecommunication advances. The network administration platform has evolved from simply a management tool to a powerful application suite that monitors employees' activity and informs managers.

The Alcatel-Lucent OmniVista 8770 Network Management System suite is a comprehensive set of applications designed to help telecom managers and administrators in their day-to-day tasks and aid them in making strategic choices in their converged networks, due to reliability, assured availability, performance information, access security, configuration management and telecommunication cost tracking.

OmniVista 8770 is part of the Alcatel-Lucent OmniVista family, the converged network management solution for Alcatel-Lucent voice products based on the OmniPCX, and data networks based on OmniStack, OmniSwitch and OmniAccess products.

OmniVista 8770 provides centralized management for the Alcatel-Lucent OmniPCX line of products:

- Alcatel-Lucent OmniPCX Enterprise Communication Server from release **8.0**
- OpenTouch Business Edition from release R1.0

This modular platform offers a suite of management applications:

- **Configuration** of a system or the global network
- **Operations Audit** (1)
- **SIP Manager** (1)
- **Topology** and **Alarms** management
- Multi-carrier consolidated **Call Accounting** and **Tracking**
- **Performance** (1) and **Voice over IP Performance**
- LDAP Enterprise **Directory** (1)
- Scheduler
- Maintenance
- Security

All the applications can be ordered and run separately, except for:

- Scheduler, Maintenance and Security, which are always included in the application
- Tracking, Voice over IP Performance and Topology, which are additional options for the Accounting, Performance and Alarms Applications

OmniVista 8770's client/server scalable platform can handle a networked or standalone OmniPCX, with up to 30,000 users on one server.

Up to **100,000 users** and 400 nodes can be managed with distributed architecture (one module per server).

There are 2 nodes in OpenTouch Business Edition R1.0.

This enhanced provisioning allows better coverage of a Service Provider's installed base.

OmniVista 8770 value propositions:

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- Manage and control convergence

  OmniVista 8770 1.0 provides tracking of Voice over IP calls, for better follow-up of the VoIP traffic and quality, and easy integration of VoIP into the customer's data network.

  Its long-term trend reporting capability aids in planning of anticipated infrastructure upgrades. OmniVista 8770 provides administrators with configuration and tracking of voice and Voice over IP with a combined applications suite.

- LDAP directory (1)

  OmniVista 8770 includes an LDAP Directory, based on the Oracle/Sun® Java System Directory Server. The Directory is automatically synchronized with the OmniPCX Enterprise network and OpenTouch Business Edition R1.0. In addition, any OmniPCX Enterprise users can place a call by simply clicking on the displayed phone number. Administrative information can be added, due to the import/export from other LDAP compliant directories, such as Lotus Notes®, Microsoft Exchange® or Active Directory®.

  The Directory can be reached via any PC through the intranet via a browser, any workstation on the LAN/WAN via the Directory client, any standard LDAP client (such as MS Outlook®).

  The Alcatel-Lucent Multimedia Attendant Console 4059 and OmniTouch Unified Communication can access the Directory in the same way.

- Integrated application suite

  Though they can be ordered separately, OmniVista 8770 1.0 applications are tightly integrated together for operational efficiency.

  Two examples:

  Modifying a user’s name in Configuration applies immediately and automatically to Directory and Accounting

  Right-clicking on any item in Topology leads to the configuration or to the alarms of this item

- Proactive tool

  As soon as new information is generated, OmniVista 8770 1.0 sends an e-mail, an alarm or launches an application to notify the appropriate person, for proactive management. For example, the instant an alarm occurs, the information can be sent via e-mail to the network manager.

  In the same way, accounting and performance reports can be automatically generated in different formats (MS Excel, .PDF, HTML, text files) and sent via e-mail to selected people.

- A distributed administration access

  OmniVista 8770 integrates an embedded security agent that configures administrators access rights. Each administrator accesses the applications according to his rights, from his workstation, through the company's LAN/WAN or through the company's intranet via a browser. Several applications can be accessed simultaneously.

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7 A high level of availability

The network requirements of each client are defined by the balance between service continuity, network needs, and cost. The resulting choice is inevitably linked to the Return On Investment (ROI) that can only be defined by the client.

As the system reliability and availability increase in importance, the requirements for additional hardware increase. This section describes some of the options and features.

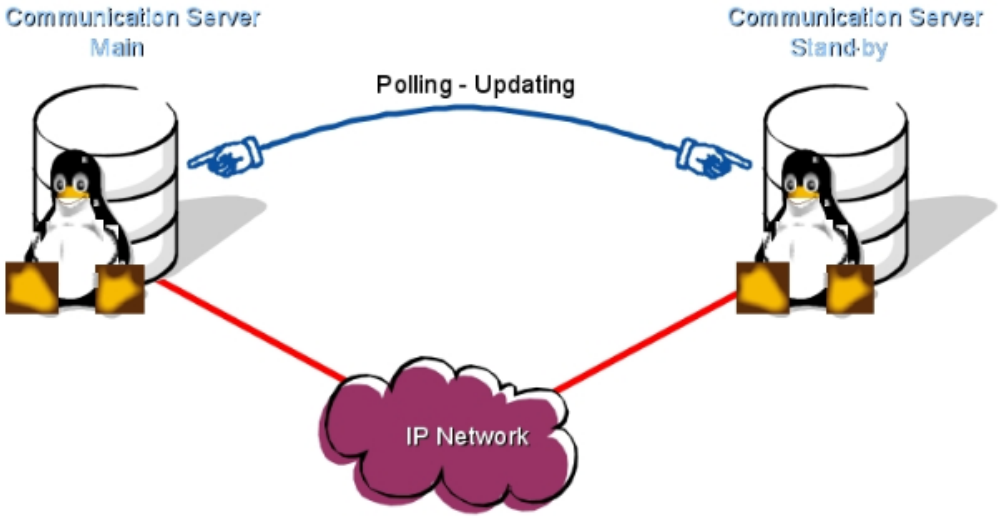
7.1 Redundancy with OmniPCX Enterprise

The Alcatel-Lucent OmniPCX Enterprise Communication Server provides a unique and secure backup mechanism when mission critical applications require high resiliency. Communication Server redundancy (duplication) allows switch over from one communication server to its mirrored communication server through an IP link.

In this type of configuration, two Communication Servers coexist in the same system. One server is active, and is the primary Communication Server. The other server is constantly in watchdog mode on standby. If the primary server fails, the standby automatically takes over.

Note: To avoid possible communication server performance distortion, the CPU hardware must be identical for both the main and standby communication servers.

During normal operation, a polling dialog is established and maintained between the main and standby communication servers. Interruption of this dialog indicates to the standby machine that the main communication server not available. The standby communication server then takes over as the main communication server.



Primary and secondary Communications Servers can be located in two geographical sites and can be in different IP sub networks thanks to dual IP addresses.

All the following applications are able to address the dual IP addresses:

- Network Management Center OmniVista 8770
- Voice mail applications

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- Alcatel-Lucent OmniTouch Contact Center - Standard Edition solution except CCoutbound solution
- XML Web Services (My Phone WS, My Messaging WS, My Management WS, My Assistant WS, IP Touch XML Services)

Note: To avoid possible desynchronization between databases, it is recommended to secure the IP link between primary and secondary Com Servers.

When the changeover takes place, active calls are maintained and calls in the process of being set up are interrupted.

The data involved in the updates includes:

- Status of the different elements (including boards and terminals)
- Configuration information
- Accounting tickets (call detail records)
- CCD data

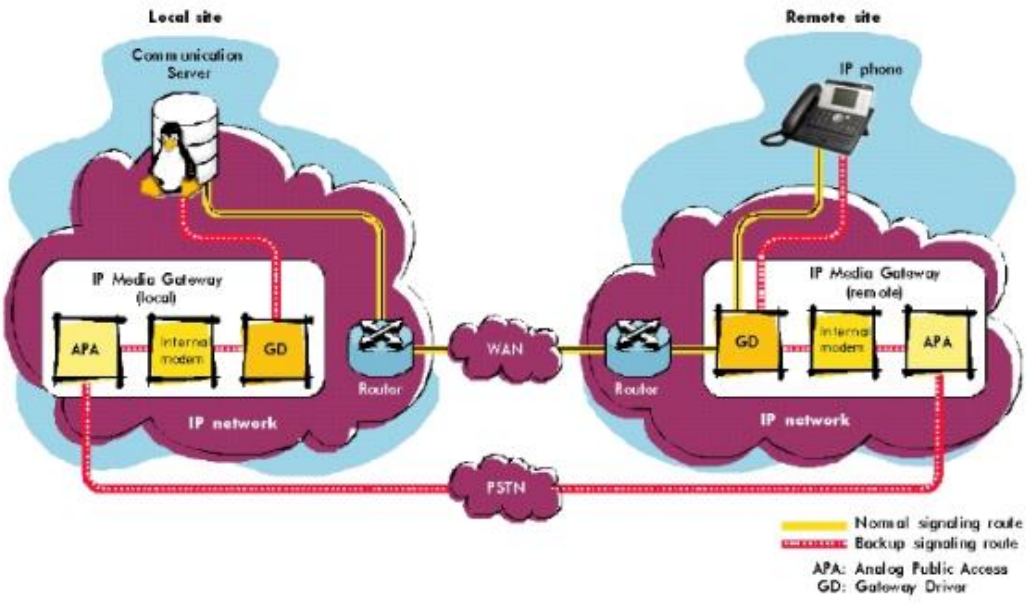
Note: A manual change over command is also available in maintenance mode.

7.2 Backup solution for remote sites

Note: This feature is only available for Standard Users.

If the IP link between the communication server and a common hardware IP media gateway is lost, a backup signaling link is used to re-establish the signaling path over the PSTN. This service is designed to ensure continued telephone service at remote sites.

During the backup connection, users can make and receive calls over the local PSTN network connection (see the next section for more details), and VoIP calls between the remote and all the other sites can be redirected via the public network.



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The communication server monitors the links to each media gateway using a polling dialog. An interruption of this dialog informs the communication server that a failure has occurred. The communication server then attempts to reach the remote media gateway over the PSTN (via GD internal modems). During this time, the remote media gateway restarts.

Return to normal

In backup mode, the media gateway periodically polls the IP network.

When the IP network connection is re-established, the media gateway switches the communication server signaling back to the normal link.

All calls are maintained while normal IP network signaling is re-established.

In addition, when the IP network is unavailable, voice inter-site communications can be established via the public network. Dialed internal numbers are translated automatically into public numbers.

This mechanism can also be used when the Call Admission Control of the remote site is reached.

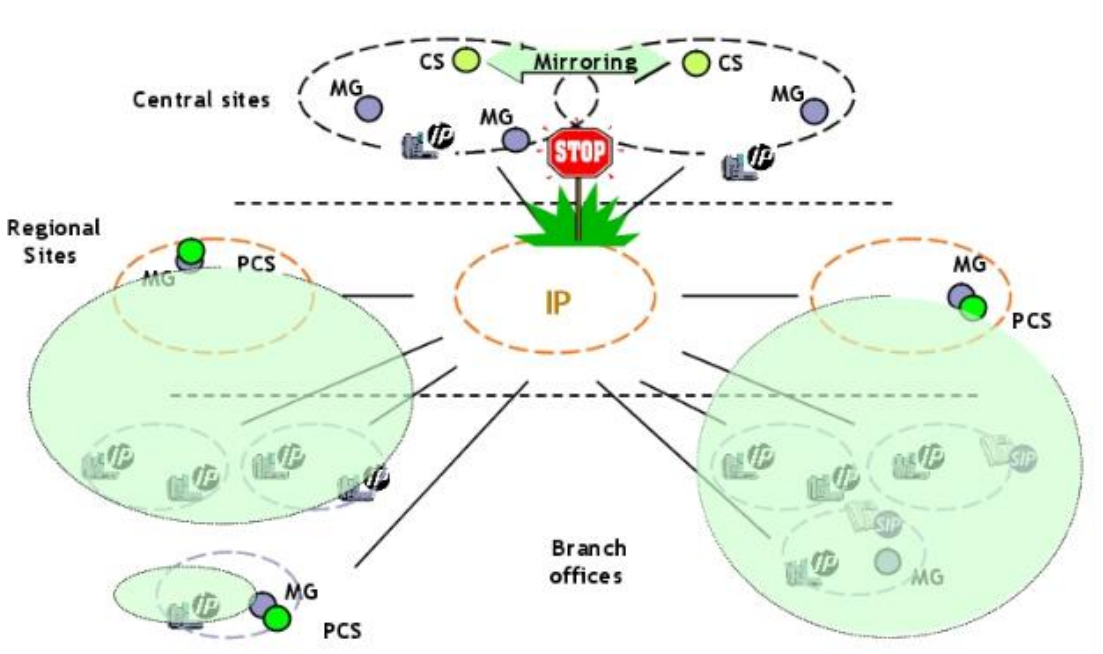
Note 2: Because a minimum of telephone services are offered for inter-site communications, it is not recommended to use this "private to public overflow" permanently.

Within the Alcatel-Lucent OmniPCX Enterprise Communication Server architecture, it is possible to mix both features, PCS and "Backup Signaling Link of Media Gateways", if they do not back up the same sites.

7.3 Full survivability for remote sites: Passive communications server

The Passive Communication Server (PCS) provides call handling services to a media gateway or group of media gateways if the Alcatel-Lucent OmniPCX Enterprise Communication Server is unavailable.

If the IP links to the site which hosts the Communication servers are broken or the Communication servers are out of service, call processing continues at a local level.



PCS use in SIP environment:

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The PCS can rescue SIP phones and SIP trunk groups (SIP trunking), provided the SIP devices (external gateways/SIP proxies, SIP phones) can handle primary and secondary DNS server addresses (to access the main and backup Com Servers), and a proxy server address (to access the PCS). The Domain Name (DN) resolution is performed with DNS A (DNS SRV is not supported).

SIP registrations on the main Com Server are not duplicated on the PCS. When the PCS becomes active (Com Servers are down), the SIP sets must register on the PCS to be in service.

The Alcatel-Lucent OmniTouch 8450 Fax Software solution does not support backup SIP proxy.

In normal conditions:

- The Communication servers control the calls within the network
- The IP Phones and/or Media Gateways within a region are defined for the PCS
- Automatic or manual synchronization of the region is carried out on a general or individual PCS basis

If Communication Server loss occurs:

- The telephony services are restarted locally
- Centralized services such as voice mail are no longer available
- All standalone features defined inside active call processing are maintained by the PCS including OmniTouch Contact Centers.
- CDRs (Call Detail Record) are recorded in the PCS

When the IP link to the OmniPCX Enterprise is back IN SERVICE, the PCS switches to standby mode either after a timer or at a configured time (typically the PCS is configured to switch at night to avoid telephone disruption).

When the PCS switches to standby mode:

- IP phones and media gateway reboot and are under the OmniPCX Enterprise control
- Accounting tickets (CDRs) are transmitted to the OmniVista 8770

The PCS is defined with the same provisioning level as the Communication Server. It can be hosted on a Common Hardware CPU, Appliance Server, or Blade Server.

Note: Because of the differences in the Database structures, IP Crystal Servers cannot be used in a PCS configuration. A PCS cannot be duplicated.

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8 Security solutions

Securing communications for all voice and data applications as well as employee mobility is the key to supporting new business models and enabling a trusted dynamic enterprise that competes effectively in today's business environment. Security must become a positive enabler to drive business performance. To achieve this objective, enterprises must have a corporate-wide strategy — a security blueprint — that allows the enterprise to be open for business and, at the same time, provide a trusted environment. This requires a shift to a user-centric approach to security, delivered from within the network to protect networks, people, processes and knowledge.

The user-centric security blueprint

A user-centric security blueprint can enable a powerful shift to a trusted, dynamic enterprise. At the same time, enterprises manage risk, protect private data, and maintain compliance.

With a security blueprint, enterprises can keep satisfying the demands of employees, business partners, and customers for always-on, always available voice and data applications, that can be accessed from anywhere and at any time.

The blueprint looks at security for the enterprise as being delivered from within the network to protect networks, people, processes and knowledge. If abiding by the blueprint, the enterprise benefits from:

- A **network** that is user-aware and provides security for voice, data and mobility, and enables compliance with policy enforcement and audit
- **People** securely collaborating across organizational boundaries, leveraging business-to-business relationships, Web 2.0, and cloud computing without security-imposed human productivity barriers
- **Processes** that are agile, automated and always secured
- **Knowledge** in the form of protected private data, as well as secured knowledge sharing

The user-centric security blueprint prescribes a global, corporate-wide security infrastructure that provides a consistent and corporate-wide application of security.

Applying the security blueprint

If following a user centric security blueprint, enterprises are positioned to leverage new business models made possible by Web 2.0, cloud computing and mobile communications technology.

Applying this security blueprint for a trusted, dynamic enterprise, requires an end-to-end approach to security. Enterprises must move beyond looking at point solutions that address specific security requirements for one area of the enterprise, to integrated solutions that enable the user centric security blueprint. User-centric security deployment offers a visual representation of the solution map that meets these objectives.

Deploying solutions complying with the user centric security blueprint starts with gaining an understanding of what perimeter security exists within the enterprise. Moving along the path laid out by the blueprint, the next step is to examine the need for network access control solutions to ensure that adequate controls are in place to allow a user and or a device onto the network. Fine grained controls may be required to enable users to access the network resources and applications they want access to, once they have been accepted onto the network.

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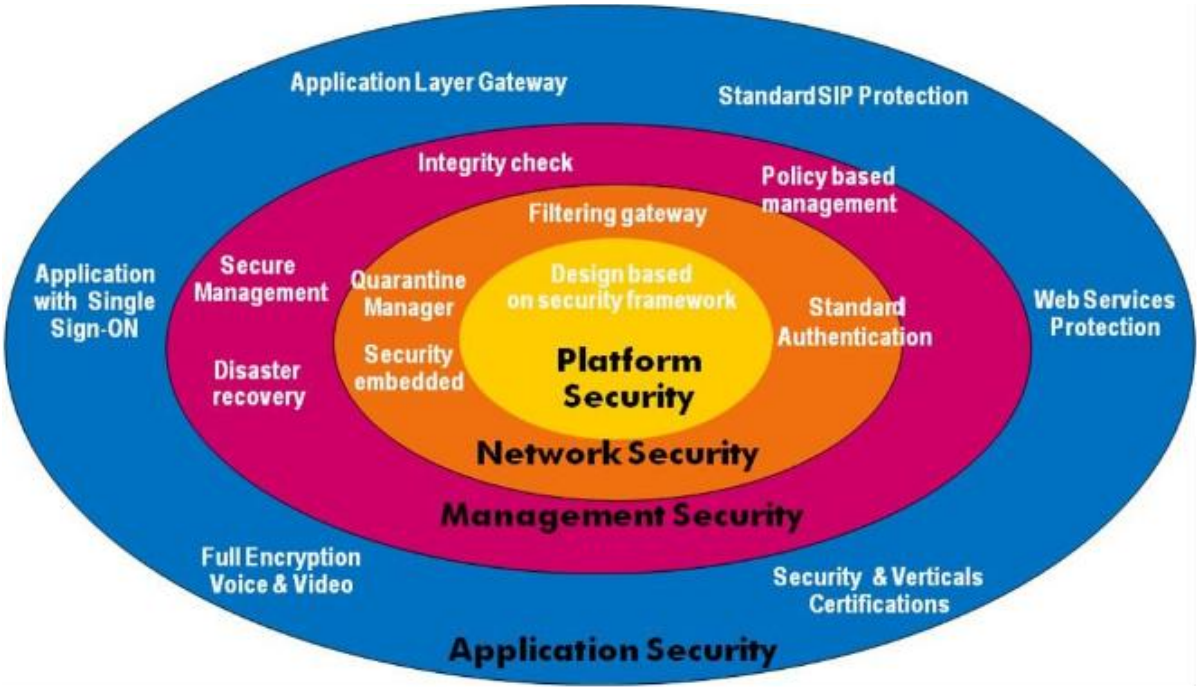
Once the voice and data fabric are secured and appropriate fine grained controls are in place, the next consideration is to target directly specific applications that require extra special treatment. This is followed by solutions to protect the mobile user and mobile assets of the corporation, such as laptops.



User-centric security deployment

Perimeter security

Choosing a perimeter security solution usually implies different choices according to the various types of enterprises. It is also greatly dependent on security strategy.

If an enterprise prefers to follow a best-of-breed approach to threat management - then separate solutions are required for firewall/VPN, anti-virus, anti-malware and web filtering. If an integrated approach to threat management is preferred, then a unified threat management and firewall solution is attractive.

If an enterprise has many independent branch offices, an integrated solution which includes routing functionality, referred to as a security router, is an approach to be considered.

In today's network, a web application firewall is a must to protect web servers and web-facing applications. One overall consideration in controlling security operations costs is scalability and manageability of the perimeter solution chosen, especially for enterprises with many locations to protect.

Network access control

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Network access control can be achieved by looking at several categories of solutions. Starting with IP address management that offers the ability to provide an address to devices connected to the network, followed by host integrity check solutions that ensure that it is safe to allow a device on the network, ending with role-based access control solutions.

Host integrity check solutions will determine if a device is configured in accordance with enterprise policy and that it contains no malware before the device is allowed onto the network. It is a must in any wireless environment where users connect devices to the network at will. Enterprises that have a stringent need to protect certain servers and applications or are in highly regulated industries, should consider role-based access control solutions to provide the required controls with audit. These solutions can be deployed without having to re-configure networks on a physical level to achieve security requirements.

Identity management

Identity management is essential to user-centric security and starts with an enterprise-wide password management platform and directory server farm. Many organizations today will consider the move to some form of strong authentication based on certificates coupled with two factor-identifications of end users and devices. Providing a rich set of interface and control points to the voice and data fabric of the enterprise is key to the deployment of an Authentication, Authorization and Accounting (AAA) infrastructure.

Of course, an enterprise-wide single sign-on capability is also important to provide an internal secured environment that remains enabling for employees. With the move to Web 2.0 and cloud computing the addition of a federated identity management capability may be necessary.

Application security

The deployment of new applications such as VoIP, the adoption of new business models leveraging Web 2.0 and the Cloud, and new compliance regulations create the need for security solutions that protect user activity with an understanding for the application being used by the end user.

With the deployment of VoIP, it is important that the existing enterprise security can ensure that the new virtualized perimeter defense and possibly encryption requirements for VoIP are met.

In the case of Web 2.0 and the Cloud, solutions that secure individual Web services and can act as a trusted intermediary with the Cloud are becoming a must have for protecting enterprises. Solutions ensuring that enterprises are compliant with regulation in the processing of monetary transactions and control the cost of being compliant are important to many enterprises.

Mobile security

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Many enterprises today have employees that spend much of their working hours outside the enterprise perimeter using mobile computing devices such as laptops. Solutions for securing mobile laptops must address the concern of private information stored on them risking being lost or stolen and also address the need to be able to configure laptops at any time.

Security management

Security management requires a number of platform choices covering performance and event management, patch management, vulnerability detection and compliance management. Solutions deployed for performance and event management must be able to install in a global enterprise, collect a rich set of data from the voice and data fabric, and provide a robust event response and escalation engine. Solutions for patch management must be able to integrate with enterprise platforms that manage mobility.

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9 Hotel/hospital management

The hospitality offer is based on OmniPCX Enterprise hardware and specific Alcatel-Lucent Hospitality Software.

The users of the system are divided into two different types:

- Administrative staff:

  The hotel or hospital staff require access to information such as the Guest Name and Room Number. Other useful information such as Language Spoken and VIP status can be useful to improve the guest service levels.

- The guests or patients

  The important features of the system are simplicity for basic functions, and agreeable ergonomics.

In the Alcatel-Lucent offer, telephones can be offered from any of the current range of telephones. Particularly in the hotel context, the Alcatel-Lucent OmniTouch™ 8082 My IC Phone is much appreciated for its aspect and its potential to include customized visible information. The screen provides an excellent platform for the additional services that the hotel or hospital can provide.

The Alcatel-Lucent OmniPCX Enterprise Communication Server hospitality software is an integrated application providing a consistent group of features designed to address the following needs:

- Handling guest arrivals and departures
- Handling group arrivals and departures
- Management for wake-up calls
- Management of guest voice messages
- Dynamic suites configurations (in guest-based configuration)
- Billing of calls (itemized and global) from rooms (two currencies are available)
- Real-time tracking of guest telephone credit (deposit)
- Verification and tracking of room status
- Management of room service
- Management of waiting messages

The OmniPCX Enterprise hospitality software can also work in association with a hospitality property management system (PMS) with the Alcatel-Lucent hospitality link (AHL) to satisfy the following needs:

- Dialing plans adaptable to the hotel configuration, such as matching phone numbers to room numbers
- Different and separate outgoing trunk groups for the room phones and the administration phones
- Specific guest requirements:
  - Check-in, Checkout
  - Billing
  - Wake-up Calls

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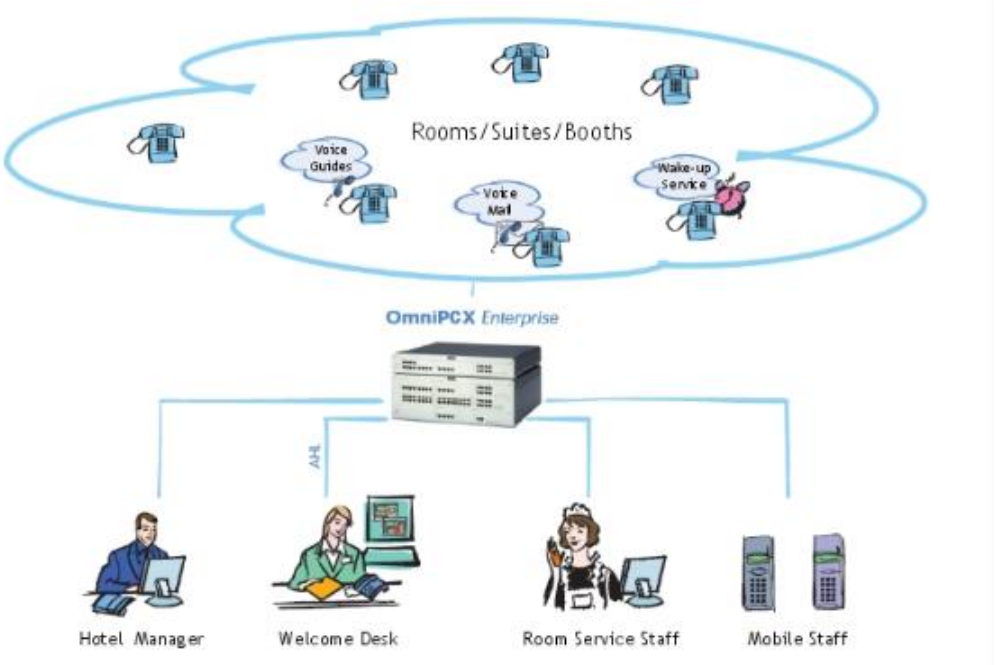
- Voicemail & Message handling, etc



9.1 Overview of available services

- Room occupancy: occupied or vacant (automatically updated by guest check-in/check-out and room assignment commands
- Room status: up to 10 statuses: to clean, being cleaned, cleaned, ready (or customizable statuses). Automatic and manual updates available
- Voice guides: up to four languages
- Wake-up calls: pre-programmed key or prefix or set by attendant, acknowledgement provided by voice guide, snooze feature (four additional wake-up calls)
- Do not Disturb: pre-programmed key or prefix or set by attendant, acknowledgement provided by voice guide, incoming calls routed to the attendant (except wake-up calls)
- Set lock/unlock: protection against misuse, PIN requested to unlock phone
- Phone booth: monitored by attendant and transferred to guest's bill
- Privacy: guest names and numbers may be masked when making internal calls
- Messages indicated by LED, automatic routing to mailbox if desired
- Call forwarding: to mailbox or internal/external number, immediate or delayed
- Greeting customization
- Multi-dispatching room service

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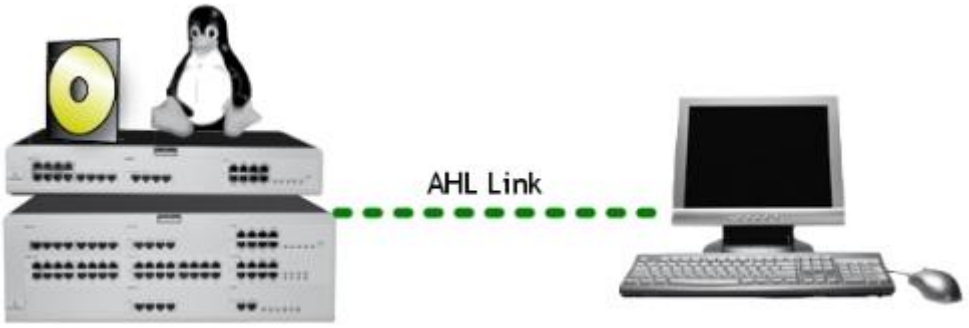
9.2 Alcatel-Lucent compatibility with other hospitality software

The Alcatel-Lucent Hospital Link (AHL) is a computer link used to access the OmniPCX Enterprise, for hotel/hospital features only, from an external PMS computer.

The AHL link enables the front office computer to incorporate telephone features in hotel/hospital management. The AHL link works on V.24 or TCP/IP Ethernet, CTI lines.

For each transaction, an acknowledgement is sent back by the other system.



Messages from the Com server	Messages from the external application
• Call ticket • Check-in/check-out • Room allocation • Room status modification • Voice mail and wake-up facilities • Guest telephone account	• Check-in/check-out • Room allocation • Assignment of voice mail facilities

The Alcatel-Lucent Applications Partners Program certifies many CMS and PMS publishers. The complete AHL protocol is only available to developers who have a partnership contract with Alcatel-Lucent.

9.3 My IC Phone hospitality package

The introduction of the Alcatel-Lucent OmniTouch™ 8082 My IC Phone opens new possibilities for communications in hotel environments. All the features of the hospitality offer are available and enhanced by the intuitive interface and high-resolution touch screen incorporated in the 8082 My IC Phone.

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The telephone screen can be customised to accentuate the company services or to show external or internal commercial offers that could be interesting for the client. Subjects of interest could include:

- The hotel or hospital services
- Weather information
- Local tourism
- Restaurant information
- Shopping propositions...

The 8082 My IC Phone set is fully compatible with Hotel management applications that can handle:

- Customer checkin/checkout
- Billing and accountancy tasks
- Guest name and directory
- In/out calls management
- Suite management
- Room status
- Wake-up calls, Do not Disturb, call forwarding
- Voice mail management

The architecture is based on the following architecture to ensure the management of the

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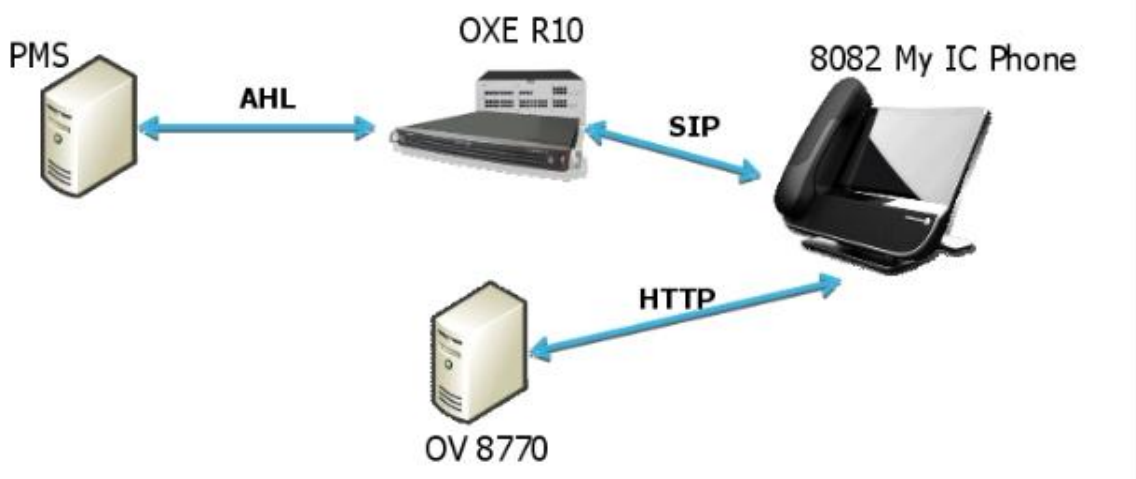
communications system.

Note: The Alcatel-Lucent OmniPCX Enterprise Communication Server requires R10 or later.



The basic client telephone displays icons to access any available services directly. In this way the client can be directed directly to improve the guest experience.

The basic hotel screen example

The following image is an example of a hotel visit to show the qualities of the conference room.

The administrative options include a set of embedded skins to instantly change the screen appearance. A useful and simple method to create ambience and coordination with color schemes.

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Embedded skins for the 8082 My IC Phone

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10 Service Offerings at a glance

Enterprise Services Overview

For optimal system integration, a wide range of Integration Services are available from the Professional Services' team – from consulting and designing to operating and maintaining your communications solution.

If you need to enrich your solution with rich value-added features, Application Services offer you ready-to-use, off-the-shelf applications for business, contact centers or network management. If further customization is required to adapt a standard solution, our development team can customize applications to your specific needs.

Support Services provide the operational security and insurance you need to ensure your Communications and Network infrastructure runs smoothly. Our Hardware support policy avoids or minimizes business disruptions. With Software support, you benefit from the highest expertise and access to latest upgrades and migration.

Professional Services

Integration Services

Our worldwide team of Professional Services consultants has successfully integrated more than 2,500 IP and TDM systems across Communications, Network and Genesys infrastructures. You also draw on our proven expertise and best practices in project management to minimize risks during implementation, and save time and cost for a seamless and secure transition.

With our Integration Services, you ensure a secure, cost-effective transformation of your communications infrastructure. Those services range from business consulting, solution design, turn-key installation or global-scale deployments to the coaching of new users.

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Consult & Design

- Business and solutions consulting
- Proof of concept
- Architecture audit & design
- Site survey

Integrate & Deploy

- Application development and customization
- Solution deployment assistance
- Acceptance tests
- Staging
- Coaching

Operate & Maintain

- Resident Engineer

Project Management

- Project, Technical and Account Management
- Global Project Management

Application Services

Application Services offer you an assessment of your specific requirements and recommendation of tailored solutions that address these needs. You can choose from a one-stop-shop of an **Off-the-shelf application** or a specifically **customized application** tailored to your exact need.

Alcatel-Lucent is unique for its agile and iterative methodology for software and applications development. This flexible, people-orientated process offers customers continuous communication, repeated review and frequent delivery to short timelines.

Custom applications

Alcatel-Lucent has an excellent track record in:

- **Developments**: Specific environments and computer- telephony integrations.
- **Customizations**: Software customization and integration with local CRMs. Customization of client e-mail templates with Unified Communications Solutions.
- **Scripts**: IVR, Genesys routing strategies.

From our wide range of applications and customization solutions, here are some examples of how we can transform your organization:

- OmniPCX RECORD Suite
  This unique solution offers small and medium-sized businesses a complete tracking of customer interactions through voice recording and screen capture, as well as coaching capabilities
- Call Admission Control (CAC) Handler
  Maintain continuous network quality with this secure solution for backup signaling. Upon notification of any network problems, the CAC Handler immediately and automatically switches the IP network over to backup mode, without affecting the quality of VoIP calls

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- Business Contact
  This intelligent call routing application automatically directs callers to the most appropriate employee across branch offices, ensuring that your clients receive a prompt and most helpful response
- Voice Quality Analysis (VQA)
  Ensure consistent high performance from your IP network. Our VQA application records and monitors each VoIP call, so your business can quickly identify any quality issues
- Integrated Communications for Control Centers (ICCC)
  Control all voice communications and access into industrial environments through a centralized customizable interface
- …

Off-the-Shelf applications

The Off-the-Shelf applications portfolio is a highly flexible set of pre-packaged, pre-tested, ready-to-use, customer-focused applications for End-User Phone and Desktop, Contact Center and Network Management.

- Attractive. Fixed costs. No risk implementation.
- Available. Fast delivery. No development to make. Already tested solution. Plug-in and use
- Adaptable. Customizable. Smooth system integration. Easy to integrate. No training needed.
- Continuous guarantee through Maintenance contract

SUPPORT SERVICES

Overview

Support Services provide Customers' communications and network infrastructures with timely maintenance, strong commitment on resolution time and the latest upgrades for software and hardware.

With technical assistance and application upgrades, Support Services keep systems running to the highest standard and with optimal efficiency. Customers gain the advantages of consistent reliable performance and an increased return on investment.

- Communications **Solution Premier Services** offers **maintenance** and **software evolution** services

- Hardware Support Services offer the choice of Return to Factory service (RTF) or Advanced Replacement service (AVR), both for Communications and Network products
- A Network Support Service Pack provides both Software and Hardware Support for Network products

Hardware Support Services

Communications and Network products are covered by the same Hardware Support Services: Return to Factory (RTF) or Advanced Replacement (AVR).

- Return to Factory (RTF)
  We repair parts within 10 working days (excluding transport) from reception of the faulty part at the Alcatel-Lucent warehouse
- Advanced Replacement (AVR)
  We replace parts within one working day (excluding transport) from time of receipt of the eService Request at the Alcatel-Lucent Support Center

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11 To conclude

We are pleased with your interest. Alcatel-Lucent Enterprise products offered in this proposal will fit perfectly in your IT environment. We are sure they will provide a cost effective contribution to your total IT solution.

All products support open standards to fit seamless in your ICT architecture and has gone through extensive testing to assure the best quality. Product assistance is worldwide available by trained and certified support personnel. In addition to support, professional service is available to deploy, maintain and even (remotely) manage your IP network.

By no means, the description of the products in this document is comprehensive. More information about products, solutions and service can be obtained via your Alcatel-Lucent Business Partner, Alcatel-Lucent sales representative and at the Internet: www.alcatel-lucent.com/enterprise.

Alcatel-Lucent works hard to bring you satisfaction and to meet your communication requirements. Your Alcatel-Lucent partner will be happy to provide you with any further information and to provide all necessary support until your new communication system is installed.

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12 Annexes

End of document

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